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SEARCH NOTES
09/726,308
4/5/05

Welcome to STN International! Enter x:x

LOGINID:ssptalar1614

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	FEB 25	CA/CAPLUS - Russian Agency for Patents and Trademarks (ROSPATENT) added to list of core patent offices covered
NEWS	4	FEB 28	PATDPAFULL - New display fields provide for legal status data from INPADOC
NEWS	5	FEB 28	BABS - Current-awareness alerts (SDIs) available
NEWS	6	FEB 28	MEDLINE/LMEDLINE reloaded
NEWS	7	MAR 02	GBFULL: New full-text patent database on STN
NEWS	8	MAR 03	REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS	9	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS	10	MAR 22	KOREAPAT now updated monthly; patent information enhanced
NEWS	11	MAR 22	Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS	12	MAR 22	PATDPASPC - New patent database available
NEWS	13	MAR 22	REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS	14	APR 04	EPFULL enhanced with additional patent information and new fields
NEWS	15	APR 04	EMBASE - Database reloaded and enhanced

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

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FILE 'HOME' ENTERED AT 08:58:02 ON 06 APR 2005

=> file medline biosis caplus embase wpids

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'MEDLINE' ENTERED AT 08:58:23 ON 06 APR 2005

FILE 'BIOSIS' ENTERED AT 08:58:23 ON 06 APR 2005

FILE 'CAPLUS' ENTERED AT 08:58:23 ON 06 APR 2005

FILE 'EMBASE' ENTERED AT 08:58:23 ON 06 APR 2005

FILE 'WPIDS' ENTERED AT 08:58:23 ON 06 APR 2005

=> s "HMG-CoA reductase" or "3-hydroxy-3-methylglutaryl" or "3-hydroxy-3-methyl glutaryl" or lovastatin? or pravastatin? or fluvastatin? or simvastatin? or atorvastatin? or rosuvastatin?
L1 58879 "HMG-COA REDUCTASE" OR "3-HYDROXY-3-METHYLGLUTARYL" OR "3-HYDROX Y-3-METHYL GLUTARYL" OR LOVASTATIN? OR PRAVASTATIN? OR FLUVASTAT IN? OR SIMVASTATIN? OR ATORVASTATIN? OR ROSUVASTATIN?

=> s squalene (W) synthase?
L2 1730 SQUALENE (W) SYNTHASE?

=> s (alisma orientale?) or typha? or (salvia miltiorhiza?) or (polygonum multiflorum?) or curcuma? or ligusticum? or polygonatum? or (polygonum cuspidatum?) or corydalis? or (chrysanthemum morifolium?)
L3 17172 (ALISMA ORIENTALE?) OR TYPHA? OR (SALVIA MILTIORHIZA?) OR (POLYG ONUM MULTIFLORUM?) OR CURCUMA? OR LIGUSTICUM? OR POLYGONATUM? OR (POLYGONUM CUSPIDATUM?) OR CORYDALIS? OR (CHRYSANTHEMUM MORIF OLIUM?)

=> s (arthemisia capillaris?) or (artemisia capillaris?) or (crataegus pinnatifida?) or (eleutheroccus senticocus?) or (eleutheroccus senticoccus?) or (astragalus membranaceus?)
L4 2244 (ARTHEMISIA CAPILLARIS?) OR (ARTEMISIA CAPILLARIS?) OR (CRATAEGU S PINNATIFIDA?) OR (ELEUTHEROCCUS SENTICOCUS?) OR (ELEUTHEROCCUS SENTICOCCUS?) OR (ASTRAGALUS MEMBRANACEUS?)

=> s phytosterol? or (plant sterol?) or cholestane? or phytostanol?
L5 17779 PHYTOSTEROL? OR (PLANT STEROL?) OR CHOLESTANE? OR PHYTOSTANOL?

=> s sitosterol? or ethyl cholesterol? or stigmasterol? or ergosterol? or lumisterol? or campesterol? or methyl cholesterol? or avenasterol? or fucosterol? or epibrassicasterol? or brassicasterol? or desmosterol?
L6 41050 SITOSTEROL? OR ETHYL CHOLESTEROL? OR STIGMASTEROL? OR ERGOSTEROL ? OR LUMISTEROL? OR CAMPESTEROL? OR METHYL CHOLESTEROL? OR AVENA STEROL? OR FUCOSTEROL? OR EPIBRASSICASTEROL? OR BRASSICASTEROL? OR DESMOSTEROL?

=> s demosterol? or dehydrocholesterol? or chalinosterol? or poriferasterol? or clionasterol? or sitostanol? or dihydrositosterol? or stigmastanol? or campestanol?
L7 5879 DEMOSTEROL? OR DEHYDROCHOLESTEROL? OR CHALINOSTEROL? OR PORIFERA STEROL? OR CLIONASTEROL? OR SITOSTANOL? OR DIHYDROSITOSTEROL? OR STIGMASTANOL? OR CAMPESTANOL?

=> s "7-α-hydroxylase" or "acyl-CoA acyl transferase"
L8 5549 "7-A-HYDROXYLASE" OR "ACYL-COA ACYL TRANSFERASE"

=> s "polygonum multiflorum" or "polygonum cuspidatum" or curcuma? or ligusticum? or polygonatum? or corydalis? or (chrysanthemum morifolium?) or (arthemisia capillaris?) or (artemisia capillaris?) or (acanthopanax senticosus?)
L9 13684 "POLYGONUM MULTIFLORUM" OR "POLYGONUM CUSPIDATUM" OR CURCUMA? OR LIGUSTICUM? OR POLYGONATUM? OR CORYDALIS? OR (CHRYSANTHEMUM

```
              MORIFOLIUM?) OR (ARTHEMISIA CAPILLARIS?) OR (ARTEMISIA CAPILLARI
              S?) OR (ACANTHOPANAX SENTICOSUS?)

=> s food? or beverage? or drink? or supplement? or (nutritional supplement?) or
(nutritional food?) or (nutritional drink?) or (nutritional beverage?)
L10     2318821 FOOD? OR BEVERAGE? OR DRINK? OR SUPPLEMENT? OR (NUTRITIONAL
              SUPPLEMENT?) OR (NUTRITIONAL FOOD?) OR (NUTRITIONAL DRINK?) OR
              (NUTRITIONAL BEVERAGE?)

=> s tablet? or capsule? or microbead? or emulsion? or powder? or granule? or
suspension? or syrup? or elixir? or gum?
L11     2815316 TABLET? OR CAPSULE? OR MICROBEAD? OR EMULSION? OR POWDER? OR
              GRANULE? OR SUSPENSION? OR SYRUP? OR ELIXIR? OR GUM?

=> s "PUFA" or (polyunsaturated fatty acid?) or (eicosapentaenoic acid?) or
(docosahexaenoic acid?) or (linoleic acid?) or antioxidant? or tocopherol? or
"vitamin E" or phospholipid? or lecithin? or (folic acid?) or "vitamin B12" or
"vitamin B6" or magnesium or "coenzyme Q10" or zinc
   2 FILES SEARCHED...
L12     2456140 "PUFA" OR (POLYUNSATURATED FATTY ACID?) OR (EICOSAPENTAENOIC
              ACID?) OR (DOCOSAHEXAENOIC ACID?) OR (LINOLEIC ACID?) OR ANTIOXI
              DANT? OR TOCOPHEROL? OR "VITAMIN E" OR PHOSPHOLIPID? OR LECITHIN
              ? OR (FOLIC ACID?) OR "VITAMIN B12" OR "VITAMIN B6" OR MAGNESIUM
               OR "COENZYME Q10" OR ZINC

=> s l1 or l2
L13       60151 L1 OR L2

=> s l3 or l4
L14       19200 L3 OR L4

=> s l5 or l6 or l7
L15       57512 L5 OR L6 OR L7

=> s l8 or l9
L16       19228 L8 OR L9

=> s l13 and l14 and l15 and l16
L17           2 L13 AND L14 AND L15 AND L16

=> dup rem l17
PROCESSING COMPLETED FOR L17
L18           2 DUP REM L17 (0 DUPLICATES REMOVED)
                ANSWER '1' FROM FILE CAPLUS
                ANSWER '2' FROM FILE WPIDS

=> d l18 1-2 ibib ed abs

L18  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2002:429411  CAPLUS
DOCUMENT NUMBER:          137:24317
TITLE:                    Cholesterol lowering supplement containing
                          phytosterols
INVENTOR(S):              Qi, Chen; De Bont, Hendricus Bartholomeus Andreas; Van
                          der Zee, Luutsche; Lansink, Mirian; Van Norren, Klaske
PATENT ASSIGNEE(S):       Neth.
SOURCE:                   U.S. Pat. Appl. Publ., 7 pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.        DATE
```

US 2002068095	A1	20020606	US 2000-726308	20001201
CA 2430315	AA	20020606	CA 2001-2430315	20011129
WO 2002043506	A2	20020606	WO 2001-NL866	20011129
WO 2002043506	A3	20021003		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002016470	A5	20020611	AU 2002-16470	20011129
EP 1337162	A2	20030827	EP 2001-998234	20011129

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.: US 2000-726308 A 20001201
WO 2001-NL866 W 20011129

ED Entered STN: 07 Jun 2002

AB The invention provides a composition and a method for lowering blood serum cholesterol levels or for preventing elevated blood serum cholesterol levels, as well as suitable composition comprising (a) one or more **phytosterols** and/or **phytostanols** or a mixture thereof capable of reducing cholesterol absorption in the intestine, (b) a composition capable of inhibiting cholesterol biosynthesis, and (c) a composition capable of increasing cholesterol metabolism, wherein at least one of compns. b. and c. is preferably derived from plants. A capsule contained **phytosterol** mist. including brapiscasterol, **campesterol**, **stigmasterol**, and **sitosterol**, Radix Polygoni multiflora estimate, and Flos Chrysanthemi extract

L18 ANSWER 2 OF 2 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2002-479986 [51] WPIDS
DOC. NO. CPI: C2002-136636
TITLE: Composition useful in food product, comprises **phytosterol** and/or **phytostanol** and/or soluble fiber, composition capable of inhibiting cholesterol biosynthesis and composition capable of increasing cholesterol metabolism.
DERWENT CLASS: B05 D13
INVENTOR(S): DE BONT, H B A; LANSINK, M; QI, C; VAN DER ZEE, L; VAN NORREN, K; CHEN, Q; VAN DER BURGT, L M J
PATENT ASSIGNEE(S): (NUTR-N) NUTRICIA NV; (DBON-I) DE BONT H B A; (LANS-I) LANSINK M; (QICC-I) QI C; (VZEE-I) VAN DER ZEE L; (VNOR-I) VAN NORREN K
COUNTRY COUNT: 100
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002043506	A2	20020606	(200251)*	EN	20

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

US 2002068095	A1	20020606	(200251)		
AU 2002016470	A	20020611	(200264)		
EP 1337162	A2	20030827	(200357)	EN	

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002043506	A2	WO 2001-NL866	20011129
US 2002068095	A1	US 2000-726308	20001201
AU 2002016470	A	AU 2002-16470	20011129
EP 1337162	A2	EP 2001-998234	20011129
		WO 2001-NL866	20011129

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2002016470	A	Based on	WO 2002043506
EP 1337162	A2	Based on	WO 2002043506

PRIORITY APPLN. INFO: US 2000-726308 20001201
ED 20020812
AN 2002-479986 [51] WPIDS
AB WO 200243506 A UPAB: 20021031
NOVELTY - A composition (I) comprises:
(a) at least one **phytosterol** and/or **phytostanol** capable of reducing cholesterol absorption in the intestine and/or at least one soluble fiber capable of inhibiting ileal bile acid absorption;
(b) a composition capable of inhibiting cholesterol biosynthesis; and
(c) a composition capable of increasing cholesterol metabolism.
At least one of (b) and (c) is derived from plants.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for reducing serum cholesterol levels or preventing elevated blood serum cholesterol levels involving administering:
(a) at least one **phytosterol** and/or **phytostanol** (at least 10 mg/day) capable of reducing cholesterol absorption in the intestine, and/or at least one soluble fiber (at least 200 mg/day) capable of inhibiting ileal bile acid absorption;
(b) a plant-derived composition capable of inhibiting cholesterol biosynthesis; and
(c) a plant-derived composition capable of increasing cholesterol metabolism.
ACTIVITY - Anticholesterol. No test data provided.
MECHANISM OF ACTION - **HMG-CoA-Reductase** -Inhibitor; **Squalene-Synthase**-Inhibitor. No test data provided.
USE - In food or beverage products, nutritional supplements, tablets, capsules, microbeads, emulsions, powders, granules, suspensions, syrups, elixirs and chewing gums and for reducing serum cholesterol levels or preventing elevated blood serum cholesterol levels (claimed).
ADVANTAGE - The composition can be administered for a longer period and avoids the potential side effects or compensatory effects associated with the administration of relatively high levels of components solely directed at reducing cholesterol absorption in the intestine or at inhibiting cholesterol synthesis or at increasing cholesterol metabolism or at only two of these three mechanisms.
Dwg.0/0

=> d his

(FILE 'HOME' ENTERED AT 08:58:02 ON 06 APR 2005)

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, WPIDS' ENTERED AT 08:58:23 ON 06 APR 2005
L1 58879 S "HMG-COA REDUCTASE" OR "3-HYDROXY-3-METHYLGLUTARYL" OR "3-HYD

```
L2          1730 S SQUALENE (W) SYNTHASE?
L3         17172 S (ALISMA ORIENTALE?) OR TYPHA? OR (SALVIA MILTIORHIZA?) OR (PO
L4          2244 S (ARTHEMISIA CAPILLARIS?) OR (ARTEMISIA CAPILLARIS?) OR (CRATA
L5         17779 S PHYTOSTEROL? OR (PLANT STEROL?) OR CHOLESTANE? OR PHYTOSTANOL
L6         41050 S SITOSTEROL? OR ETHYL CHOLESTEROL? OR STIGMASTEROL? OR ERGOSTE
L7          5879 S DEMOSTEROL? OR DEHYDROCHOLESTEROL? OR CHALINOSTEROL? OR PORIF
L8          5549 S "7-A-HYDROXYLASE" OR "ACYL-COA ACYL TRANSFERASE"
L9         13684 S "POLYGONUM MULTIFLORUM" OR "POLYGONUM CUSPIDATUM" OR CURCUMA?
L10      2318821 S FOOD? OR BEVERAGE? OR DRINK? OR SUPPLEMENT? OR (NUTRITIONAL S
L11      2815316 S TABLET? OR CAPSULE? OR MICROBEAD? OR EMULSION? OR POWDER? OR
L12      2456140 S "PUFA" OR (POLYUNSATURATED FATTY ACID?) OR (EICOSAPENTAENOIC
L13        60151 S L1 OR L2
L14        19200 S L3 OR L4
L15        57512 S L5 OR L6 OR L7
L16        19228 S L8 OR L9
L17            2 S L13 AND L14 AND L15 AND L16
L18            2 DUP REM L17 (0 DUPLICATES REMOVED)

=> s l13 and l15 and l16
L19           63 L13 AND L15 AND L16

=>  dup rem l19
PROCESSING COMPLETED FOR L19
L20           36 DUP REM L19 (27 DUPLICATES REMOVED)
                 ANSWERS '1-11' FROM FILE MEDLINE
                 ANSWERS '12-14' FROM FILE BIOSIS
                 ANSWERS '15-29' FROM FILE CAPLUS
                 ANSWERS '30-35' FROM FILE EMBASE
                 ANSWER '36' FROM FILE WPIDS

=> s l20 and cholesterol?
L21           36 L20 AND CHOLESTEROL?

=> d l21 1-36 ibib ed abs

L21  ANSWER 1 OF 36     MEDLINE on STN
ACCESSION NUMBER:    2001507103     MEDLINE
DOCUMENT NUMBER:     PubMed ID: 11555847
TITLE:               Plant stanol fatty acid esters inhibit cholesterol
                     absorption and hepatic hydroxymethyl glutaryl coenzyme A
                     reductase activity to reduce plasma levels in rabbits.
AUTHOR:              Xu G; Salen G; Shefer S; Tint G S; Nguyen L B; Batta A K;
                     Pcolinsky M
CORPORATE SOURCE:    Medical Service, Veterans Affairs Medical Center, East
                     Orange, NJ 07018-1095, USA.
CONTRACT NUMBER:     DK26756 (NIDDK)
     HL18094 (NHLBI)
SOURCE:              Metabolism: clinical and experimental, (2001 Sep) 50 (9)
                     1106-12.
                     Journal code: 0375267. ISSN: 0026-0495.
PUB. COUNTRY:        United States
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
ENTRY MONTH:         200110
ENTRY DATE:          Entered STN: 20010917
                     Last Updated on STN: 20011022
                     Entered Medline: 20011018
ED   Entered STN: 20010917
     Last Updated on STN: 20011022
     Entered Medline: 20011018
AB   The aim of this study was to study the inhibitory effect of dietary
     stanols (campestanol and sitostanol) fatty acid esters
     (SE) on intestinal cholesterol absorption.  New Zealand white
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rabbits were fed regular chow alone or enriched with 0.2% **cholesterol**, 0.33% SE + **cholesterol**, 0.66% SE + **cholesterol**, 1.2% SE + **cholesterol**, 2.4% SE + **cholesterol**, and 1.2% SE alone. After 2 weeks, plasma **cholesterol** levels increased 3.6 times in the **cholesterol** group and did not decrease after addition of 0.33% or 0.66% SE to the **cholesterol**-enriched diets. However, after addition of 1.2% SE to the **cholesterol** diet, plasma **cholesterol** concentration decreased 50% (P <.001), but it did not decrease further after doubling of SE to 2.4%. Percent **cholesterol** absorption measured by the plasma dual-isotope ratio method was 73.0% +/- 8.1 % in the **cholesterol** group, which was similar to untreated baseline control. The percent absorption of **cholesterol** did not decrease significantly after addition of 0.33% or 0.66% SE to the **cholesterol** diet but decreased 43.8% (P <.001) in the 1.2% SE + **cholesterol** group, a finding similar to those in rabbits fed 1.2% SE alone. Increasing SE to 2.4% in the **cholesterol** diet did not further decrease absorption. Hepatic hydroxymethyl glutaryl coenzyme A (**HMG-CoA**) **reductase** activity reflecting **cholesterol** synthesis and low-density lipoprotein receptor-mediated binding unexpectedly decreased 67% (P <.01) and 57% (P <.05) in rabbits fed 1.2% SE alone. Increasing dietary SE intake to 1.2% reduced **cholesterol** absorption and plasma levels. Dietary SE intake below 1.2% was ineffective and above 2.4% did not further decrease percent absorption or plasma **cholesterol** levels. These results support the hypothesis that dietary SEs competitively displace **cholesterol** from intestinal micelles to reduce **cholesterol** absorption and decrease plasma **cholesterol** levels.

L21 ANSWER 2 OF 36 MEDLINE on STN
ACCESSION NUMBER: 2001330168 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11398149
TITLE: Hepatic **cholesterol** and bile acid synthesis, low-density lipoprotein receptor function, and plasma and fecal sterol levels in mice: effects of apolipoprotein E deficiency and probucol or **phytosterol** treatment.
AUTHOR: Moghadasian M H; Nguyen L B; Shefer S; Salen G; Batta A K; Frohlich J J
CORPORATE SOURCE: Department of Pathology and Laboratory Medicine, St. Paul's Hospital and University of British Columbia, Vancouver, BC, Canada.
CONTRACT NUMBER: DK 26756 (NIDDK)
SOURCE: Metabolism: clinical and experimental, (2001 Jun) 50 (6) 708-14.
Journal code: 0375267. ISSN: 0026-0495.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200107
ENTRY DATE: Entered STN: 20010709
Last Updated on STN: 20010709
Entered Medline: 20010705
ED Entered STN: 20010709
Last Updated on STN: 20010709
Entered Medline: 20010705
AB We compared hepatic **cholesterol** metabolism in apolipoprotein (apo) E-knockout (KO) mice with their wild-type counterparts. We also investigated the effects of treatment with **phytosterols** or probucol on the activity of hepatic **3-hydroxy-3-methyl-glutaryl** coenzyme A (**HMG-CoA**) **reductase** (**cholesterol** synthesis), **cholesterol 7 alpha-hydroxylase** and

sterol 27-hydroxylase (bile acid synthesis), and low-density lipoprotein (LDL) receptor function in this animal model of atherogenesis. These findings were then related to treatment-induced changes in plasma, hepatic, and fecal sterol concentrations. Mouse liver membranes have binding sites similar to LDL receptors; the receptor-mediated binding represents 80% of total binding and is LDL concentration-dependent. These binding sites have higher affinity for apo E-containing particles than apo B only-containing particles. Deletion of apo E gene was associated with several-fold increases in plasma **cholesterol** levels, 1.5-fold increase in hepatic **cholesterol** concentrations, 50% decrease in **HMG-CoA reductase** activity, 30% increase in **cholesterol 7 alpha-hydroxylase** and 25% decrease in LDL receptor function. Treatment of apo E-KO mice with either probucol or **phytosterols** significantly reduced plasma **cholesterol** levels. **Phytosterols** significantly increased the activity of hepatic **HMG-CoA reductase**, and probucol significantly increased **cholesterol 7 alpha-hydroxylase** activity. Neither treatment significantly altered hepatic LDL receptor function. **Phytosterols**, but not probucol, significantly increased fecal sterol excretion and decreased hepatic **cholesterol** concentrations. Plasma **cholesterol** lowering effects of **phytosterols** and probucol are due to different mechanisms: stimulation of **cholesterol** catabolism via increased bile acid synthesis by probucol and decreased **cholesterol** absorption by **phytosterols**. In the absence of apo E, hepatic LDL receptors could not be upregulated and did not contribute to the **cholesterol** lowering effects of either agent.

L21 ANSWER 3 OF 36 MEDLINE on STN

ACCESSION NUMBER: 95221597 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7706454
TITLE: Unexpected inhibition of **cholesterol 7 alpha-hydroxylase** by **cholesterol** in New Zealand white and Watanabe heritable hyperlipidemic rabbits.
AUTHOR: Xu G; Salen G; Shefer S; Ness G C; Nguyen L B; Parker T S; Chen T S; Zhao Z; Donnelly T M; Tint G S
CORPORATE SOURCE: Medical Service, Veterans Affairs Medical Center, East Orange, New Jersey 07018, USA.
CONTRACT NUMBER: DK-18707 (NIDDK)
HL-17818 (NHLBI)
HL-18094 (NHLBI)
+
SOURCE: Journal of clinical investigation, (1995 Apr) 95 (4) 1497-504.
Journal code: 7802877. ISSN: 0021-9738.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199505
ENTRY DATE: Entered STN: 19950518
Last Updated on STN: 19980206
Entered Medline: 19950509

ED Entered STN: 19950518
Last Updated on STN: 19980206
Entered Medline: 19950509

AB We investigated the effect of **cholesterol** feeding on plasma **cholesterol** concentrations, hepatic activities and mRNA levels of **HMG-CoA reductase** and **cholesterol 7 alpha-hydroxylase** and hepatic LDL receptor function and mRNA levels in 23 New Zealand White (NZW) and 17 Watanabe

heritable hyperlipidemic (WHHL) rabbits. Plasma **cholesterol** concentrations were 9.9 times greater in WHHL than NZW rabbits and rose significantly in both groups when **cholesterol** was fed. Baseline liver **cholesterol** levels were 50% higher but rose only 26% in WHHL as compared with 3.6-fold increase with the **cholesterol** diet in NZW rabbits. In both rabbit groups, hepatic total **HMG-CoA reductase** activity was similar and declined > 60% without changing enzyme mRNA levels after **cholesterol** was fed. In NZW rabbits, **cholesterol** feeding inhibited LDL receptor function but not mRNA levels. As expected, receptor-mediated LDL binding was reduced in WHHL rabbits. Hepatic **cholesterol 7 alpha-hydroxylase** activity and mRNA levels were 2.8 and 10.4 times greater in NZW than WHHL rabbits. Unexpectedly, **cholesterol 7 alpha-hydroxylase** activity was reduced 53% and mRNA levels were reduced 79% in NZW rabbits with 2% **cholesterol** feeding. These results demonstrate that WHHL as compared with NZW rabbits have markedly elevated plasma and higher liver **cholesterol** concentrations, less hepatic LDL receptor function, and very low hepatic **cholesterol 7 alpha-hydroxylase** activity and mRNA levels. Feeding **cholesterol** to NZW rabbits increased plasma and hepatic concentrations greatly, inhibited LDL receptor-mediated binding, and unexpectedly suppressed **cholesterol 7 alpha-hydroxylase** activity and mRNA to minimum levels similar to WHHL rabbits. Dietary **cholesterol** accumulates in the plasma of NZW rabbits, and WHHL rabbits are hypercholesterolemic because reduced LDL receptor function is combined with decreased catabolism of **cholesterol** to bile acids.

L21 ANSWER 4 OF 36 MEDLINE on STN
ACCESSION NUMBER: 95114146 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7814648
TITLE: Reproducing abnormal **cholesterol** biosynthesis as seen in the Smith-Lemli-Opitz syndrome by inhibiting the conversion of 7-**dehydrocholesterol** to **cholesterol** in rats.
COMMENT: Comment in: J Clin Invest. 1995 Jan;95(1):2. PubMed ID: 7814615
AUTHOR: Xu G; Salen G; Shefer S; Ness G C; Chen T S; Zhao Z; Tint G S
CORPORATE SOURCE: Department of Veterans Affairs Medical Center, East Orange, New Jersey 07018.
CONTRACT NUMBER: DK-18707 (NIDDK)
HL-17818 (NHLBI)
HL-18094 (NHLBI)
+
SOURCE: Journal of clinical investigation, (1995 Jan) 95 (1) 76-81. Journal code: 7802877. ISSN: 0021-9738.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199502
ENTRY DATE: Entered STN: 19950217
Last Updated on STN: 19950217
Entered Medline: 19950209
ED Entered STN: 19950217
Last Updated on STN: 19950217
Entered Medline: 19950209
AB The Smith-Lemli-Opitz syndrome is a recessive inherited disorder characterized by neurologic developmental defects and dysmorphic features in many organs. Recently, abnormal **cholesterol** biosynthesis with impaired conversion of 7-**dehydrocholesterol** to **cholesterol** has been discovered in homozygotes. To reproduce the

biochemical abnormality, BM 15.766, a competitive inhibitor of 7-**dehydrocholesterol**-delta 7-reductase, the enzyme that catalyzes the conversion of 7-**dehydrocholesterol** into **cholesterol** was fed by gavage to rats. After 14 d, plasma **cholesterol** concentrations declined from 48 mg/dl to 16 mg/dl and 7-dehydro-**cholesterol** levels rose from trace to 17 mg/dl. Hepatocytes surrounding the central vein developed balloon necrosis. Stimulating **cholesterol** synthesis with cholestyramine followed by BM 15.766 produced an additional 40% decline ($P < 0.05$) in plasma **cholesterol** and 34% increase in 7-**dehydrocholesterol** levels compared to the inhibitor alone. Adding 2% **cholesterol** to the diet during the second week of BM 15.766 treatment increased plasma **cholesterol** threefold and decreased 7-**dehydrocholesterol** concentrations 55%. Hepatic **3-hydroxy-3-methylglutaryl** co-enzyme A (**HMG-CoA**) **reductase** activity increased 73% with a 3.9-fold rise in mRNA levels but **cholesterol 7 alpha-hydroxylase** activity decreased slightly though mRNA levels increased 1.4 times with BM 15.766 treatment. These results demonstrate that BM 15.766 is a potent inhibitor of 7-**dehydrocholesterol** -delta 7-reductase. The model reproduces abnormal **cholesterol** biosynthesis as seen in the Smith-Lemli-Opitz syndrome and is useful to test different treatment strategies. Stimulating early steps of **cholesterol** synthesis worsens the biochemical abnormalities while feeding **cholesterol** inhibits abnormal synthesis, improves the biochemical abnormalities and prevents liver damage.

L21 ANSWER 5 OF 36 MEDLINE on STN
ACCESSION NUMBER: 94292111 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8020891
TITLE: The effect of increased hepatic **sitosterol** on the regulation of **3-hydroxy-3-methylglutaryl**-coenzyme A reductase and **cholesterol 7 alpha-hydroxylase** in the rat and **sitosterolemic** homozygotes.
AUTHOR: Shefer S; Salen G; Bullock J; Nguyen L B; Ness G C; Vhao Z; Belamarich P F; Chowdhary I; Lerner S; Batta A K; +
CORPORATE SOURCE: Sammy Davis Jr. National Liver Institute, University of Medicine and Newark 07103.
CONTRACT NUMBER: DK 26756 (NIDDK)
HL 17818 (NHLBI)
HL 18094 (NHLBI)
+
SOURCE: Hepatology (Baltimore, Md.), (1994 Jul) 20 (1 Pt 1) 213-9. Journal code: 8302946. ISSN: 0270-9139.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199407
ENTRY DATE: Entered STN: 19940815
Last Updated on STN: 19940815
Entered Medline: 19940729
ED Entered STN: 19940815
Last Updated on STN: 19940815
Entered Medline: 19940729
AB We investigated hepatic **cholesterol** homeostasis in four homozygous **sitosterolemic** subjects from two unrelated families who showed enhanced absorption, diminished removal and increased tissue and plasma concentrations of **sitosterol** (24-**ethyl cholesterol**). Measurements of hepatic **3-hydroxy-3-methylglutaryl** coenzyme A reductase activities were correlated with steady state messenger RNA levels and related to

cholesterol 7 alpha-hydroxylase activities in the **sitosterolemic** homozygotes and nine controls. Similar determinations were made in rats infused intravenously with **sitosterol** so that hepatic and plasma **sitosterol** concentrations increased to about 10% of total sterols to resemble the human disease **sitosterolemia**. In the four **sitosterolemic** homozygotes, hepatic **3-hydroxy-3-methylglutaryl** coenzyme A reductase activities were markedly reduced (12% of normal), and steady state **3-hydroxy-3-methylglutaryl** coenzyme A reductase messenger RNA levels barely detected. In contrast, hepatic **3-hydroxy-3-methylglutaryl** coenzyme A reductase activities and messenger RNA levels were not decreased in rats with similarly elevated hepatic **sitosterol** concentrations. However, hepatic **cholesterol 7 alpha-hydroxylase** activity was inhibited 30% in both the **sitosterolemic** homozygotes and rats with high liver **sitosterol** concentrations. Plasma **cholesterol** concentrations increased 120% in the **sitosterol**-infused rats and 29% in the untreated human homozygotes. These results demonstrate that high-tissue **sitosterol** concentrations do not inhibit hepatic **3-hydroxy-3-methylglutaryl** coenzyme A reductase activityor steady state messenger RNA levels and that they competitively block **cholesterol 7 alpha-hydroxylase** activity and raise plasma **cholesterol** levels. Thus the deficiency of **3-hydroxy-3-methylglutaryl** coenzyme A reductase in the liver of **sitosterolemic** homozygotes is inherited and not due to the hepatic accumulation of **sitosterol**.(ABSTRACT TRUNCATED AT 250 WORDS)

L21 ANSWER 6 OF 36 MEDLINE on STN
ACCESSION NUMBER: 94270407 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8209915
TITLE: Developmental regulation of the expression of genes encoding proteins involved in **cholesterol** homeostasis.
AUTHOR: Ness G C
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, College of Medicine, University of South Florida, Tampa 33612.
SOURCE: American journal of medical genetics, (1994 May 1) 50 (4) 355-7.
Journal code: 7708900. ISSN: 0148-7299.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199407
ENTRY DATE: Entered STN: 19940721
Last Updated on STN: 19940721
Entered Medline: 19940712

ED Entered STN: 19940721
Last Updated on STN: 19940721
Entered Medline: 19940712

AB The developmental patterns of expression of **HMG-CoA reductase**, farnesyl pyrophosphate synthase, **cholesterol 7 alpha-hydroxylase**, and LDL receptor were investigated using Northern blotting analysis to quantitate mRNA levels. It was found that **HMG-CoA reductase** and farnesyl pyrophosphate synthase mRNA levels in brain reached peaks at age 4 days which correlates with the time of peak enzyme activity and the onset of rapid brain growth and myelination. In liver, **HMG-CoA reductase** and **cholesterol 7 alpha-hydroxylase** mRNA both rose dramatically at weaning. This is consistent with the concept that de novo synthesized

cholesterol is the preferred substrate for **cholesterol 7 alpha-hydroxylase** and may also be involved in the induction of the enzyme. In testes, **HMG-CoA reductase** activity was highest at age 21 days and then declined, while LDL receptor mRNA levels rose from age 31 to 120 days. These studies suggest a major role for de novo **cholesterol** synthesis in developing brain, liver, and testes.

L21 ANSWER 7 OF 36 MEDLINE on STN
ACCESSION NUMBER: 91217547 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1708805
TITLE: Regulation of bile acid synthesis. V. Inhibition of conversion of 7-**dehydrocholesterol** to **cholesterol** is associated with down-regulation of **cholesterol 7 alpha-hydroxylase** activity and inhibition of bile acid synthesis.
AUTHOR: Pandak W M; Vlahcevic Z R; Heuman D M; Hylemon P B
CORPORATE SOURCE: Department of Medicine, Medical College of Virginia, Richmond 23298.
SOURCE: Journal of lipid research, (1990 Dec) 31 (12) 2149-58. Journal code: 0376606. ISSN: 0022-2275.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199105
ENTRY DATE: Entered STN: 19910623
Last Updated on STN: 19970203
Entered Medline: 19910531

ED Entered STN: 19910623
Last Updated on STN: 19970203
Entered Medline: 19910531

AB In the chronic bile fistula rat, the administration of a bolus dose of mevinolinic acid, an inhibitor of **HMG-CoA reductase**, was followed by rapid down-regulation of **cholesterol 7 alpha-hydroxylase** activity and a decrease in bile acid synthesis. These observations suggested that either newly synthesized **cholesterol** or some other metabolite of mevalonate may be involved in the regulation of bile acid synthesis. In order to distinguish between these two alternatives, we carried out experiments in which **cholesterol** synthesis was blocked by AY9944, a compound that inhibits the conversion of 7-**dehydrocholesterol** to **cholesterol**, a last step in the **cholesterol** biosynthesis pathway. Rats underwent biliary diversion for 72 h at which time they were given intravenously either a bolus dose of AY9944 (1 mg/kg) or control vehicle. At 0 (pre-treatment control), 0.5, 1.5, and 3 h post bolus, livers were harvested and specific activities of **cholesterol 7 alpha-hydroxylase** were determined. At 1.5, 3, and 6 h post bolus, AY9944 inhibited bile acid synthesis by 19 +/- 6%, 40 +/- 4%, and 41 +/- 6%, respectively, as compared to pretreatment baseline. **Cholesterol 7 alpha-hydroxylase** activity determined at 0.5, 1.5, and 3 h was decreased by 44 +/- 6%, 44 +/- 2%, and 36 +/- 2%, respectively, as compared to the control value. In in vitro experiments using microsomes from livers of control bile fistula rats, the addition of AY9944 (up to 100 microM) failed to inhibit **cholesterol 7 alpha-hydroxylase** activity. The results of this study demonstrate that, in the chronic bile fistula rat, acute inhibition of **cholesterol** synthesis at either early or late steps leads to a rapid down-regulation of **cholesterol 7 alpha-hydroxylase** activity and decrease in bile acid synthesis.

L21 ANSWER 8 OF 36 MEDLINE on STN
ACCESSION NUMBER: 89313140 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2747437
TITLE: Effect of **sitosterol** on the rate-limiting enzymes in **cholesterol** synthesis and degradation.
AUTHOR: Boberg K M; Akerlund J E; Bjorkhem I
CORPORATE SOURCE: Institute of Clinical Biochemistry, University of Oslo, Norway.
SOURCE: Lipids, (1989 Jan) 24 (1) 9-12.
Journal code: 0060450. ISSN: 0024-4201.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198908
ENTRY DATE: Entered STN: 19900309
Last Updated on STN: 19970203
Entered Medline: 19890825

ED Entered STN: 19900309
Last Updated on STN: 19970203
Entered Medline: 19890825

AB Attempts were made to develop an animal model for **phytosterolemia**. Infusion of Intralipid containing 0.2% **sitosterol** in rats gave circulating levels of **sitosterol** of about 2.5 mmol/l, which is similar to or higher than those present in patients with untreated **phytosterolemia**. In addition, the infusions gave serum levels of **cholesterol** nearly twice those obtained in rats infused with Intralipid alone or Intralipid containing 0.2% **cholesterol**. The hepatic **HMG-CoA reductase** activity was unaffected or slightly increased by the **sitosterol** infusions (not statistically significant). The **cholesterol 7 alpha-hydroxylase** activity was slightly depressed (ca. 30%). In the case of 7 alpha-hydroxylation of endogenous **cholesterol**, the depression reached statistical significance (p less than 0.05). The microsomal content of **sitosterol** in the **sitosterol**-infused rats was about 30% of that of microsomal **cholesterol**. The effect of **sitosterol** on 7 alpha-hydroxylation of **cholesterol** was investigated by incubations of acetone powder of rat liver microsomes with mixtures of **cholesterol** and **sitosterol**. **Sitosterol** mixed with **cholesterol** to a composition similar to that found in the above microsomal fraction had a depressing effect on 7 alpha-hydroxylation of **cholesterol**. This degree of depression was of the same magnitude as that found in the **sitosterol** infusion experiments. The possibility is discussed that the hypercholesterolemia obtained in the beta-**sitosterol**-infused rats is due to the inhibitory effect of **sitosterol** on the **cholesterol 7 alpha -hydroxylase**.

L21 ANSWER 9 OF 36 MEDLINE on STN
ACCESSION NUMBER: 89313130 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2747429
TITLE: Effect of dietary n-3 polyunsaturated fatty acids on **cholesterol** synthesis and degradation in rats of different ages.
AUTHOR: Choi Y S; Goto S; Ikeda I; Sugano M
CORPORATE SOURCE: Laboratory of Nutrition Chemistry, School of Agriculture, Kyushu University, Fukuoka, Japan.
SOURCE: Lipids, (1989 Jan) 24 (1) 45-50.
Journal code: 0060450. ISSN: 0024-4201.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals

ENTRY MONTH: 198908
ENTRY DATE: Entered STN: 19900309
Last Updated on STN: 19970203
Entered Medline: 19890825
ED Entered STN: 19900309
Last Updated on STN: 19970203
Entered Medline: 19890825
AB Male Sprague-Dawley rats four weeks or eight months of age were fed purified diets containing 10% fat, either as a blend of safflower oil and palm olein (polyunsaturated fatty acids, PUFA, 34%), a blend of linseed oil and palm olein (PUFA, 33%) or sardine oil (PUFA, 33%) for four weeks. In other trials, sterol contents were made equivalent by supplementing **cholesterol** to a blend of corn oil and palm olein (PUFA, 30%) or **phytosterol** to sardine oil (PUFA, 30%). Fish oil was hypolipidemic in rats of different ages, but it tended to increase liver **cholesterol** in adult animals and this was not improved by the addition of **phytosterol**. The age-dependent increase in liver **cholesterol** was not duplicated in rats fed a vegetable fat blend supplemented with **cholesterol**. At both ages, liver **3-hydroxy-3-methylglutaryl** coenzyme A reductase activity was lower in the sardine oil than in the other groups. There were no significant age- or diet-related differences in the activity of liver **cholesterol 7 alpha-hydroxylase**. Fecal steroid excretion was comparable in age-matched rats fed diets supplemented either with **cholesterol** or **phytosterol**. Sardine oil reduced the delta 6-desaturase activity markedly as compared with linseed oil, and age-dependent reduction of the desaturase activity was observed in all dietary groups examined. Thus, the results showed a specific effect of fish oil on lipid metabolism.

L21 ANSWER 10 OF 36 MEDLINE on STN
ACCESSION NUMBER: 85104886 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3968056
TITLE: Suitability of primary monolayer cultures of adult rat hepatocytes for studies of **cholesterol** and bile acid metabolism.
AUTHOR: Hylemon P B; Gurley E C; Kubaska W M; Whitehead T R; Guzelian P S; Vlahcevic Z R
SOURCE: Journal of biological chemistry, (1985 Jan 25) 260 (2) 1015-9.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198503
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19970203
Entered Medline: 19850306
ED Entered STN: 19900320
Last Updated on STN: 19970203
Entered Medline: 19850306
AB Monolayer cultures of hepatocytes isolated from cholestyramine-fed rats and incubated in serum-free medium converted exogenous [4-14C] **cholesterol** into bile acids at a 3-fold greater rate than did cultures of hepatocytes prepared from untreated rats. Cholic acid and beta-muricholic acid identified and quantitated by gas-liquid chromatography and thin-layer chromatography were synthesized by cultured cells for at least 96 h following plating. The calculated synthesis rate of total bile acids by hepatocytes prepared from cholestyramine-fed animals was approximately 0.058 micrograms/mg protein/h. beta-Muricholic acid was synthesized at approximately a 3-fold greater rate than cholic acid in these cultures. Cultured hepatocytes rapidly converted the

following intermediates of the bile acid pathway; 7 alpha-hydroxy[7 beta-3H]**cholesterol**, 7 alpha-hydroxy-4-[6 beta-3H] cholesten-3-one, and 5 beta-[7 beta-3H]**cholestane**-3 alpha, 7 alpha, 12 alpha-triol into bile acids. [24-14C]Chenodeoxycholic acid and [3H]ursodeoxycholic acid were rapidly biotransformed to beta-muricholic acid. **3-Hydroxy-3-methylglutaryl** -coenzyme A reductase activity measured in microsomes of cultured hepatocytes decreased during the initial 48 h following plating, but remained relatively constant for the next 72 h. In contrast, **cholesterol 7 alpha-hydroxylase** activity appeared to decrease during the first 48 h, followed by an increase over the next 48 h. Despite the apparent changes in enzyme activity in vitro, the rate of bile acid synthesis by whole cells during this time period remained constant. It is concluded that primary monolayer cultures of rat hepatocytes can serve as a useful model for studying the interrelationship between **cholesterol** and bile acid metabolism.

L21 ANSWER 11 OF 36 MEDLINE on STN
ACCESSION NUMBER: 84266547 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6547738
TITLE: Role of hydrophilic bile acids and of sterols on cholelithiasis in the hamster.
AUTHOR: Singhal A K; Cohen B I; Finver-Sadowsky J; McSherry C K; Mosbach E H
CONTRACT NUMBER: HL-24061 (NHLBI)
SOURCE: Journal of lipid research, (1984 Jun) 25 (6) 564-70. Journal code: 0376606. ISSN: 0022-2275.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198409
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19970203
Entered Medline: 19840906

ED Entered STN: 19900320
Last Updated on STN: 19970203
Entered Medline: 19840906

AB The effect of various dietary additions such as **cholesterol**, beta-**sitosterol**, bile acids, and bile acid analogs on gallstone formation was studied in the hamster. Gallstones were formed in 50% of the animals fed a high glucose, fat-free diet. Administration of 0.2% **cholesterol** or 1% beta-**sitosterol** had no effect on the incidence of gallstones. Ursodeoxycholic acid (0.5%) and its analog ursodeoxy-oxazoline [2-(3 alpha, 7 beta-dihydroxy-24-nor-5 beta-cholanyl)-4,4-dimethyl-2- oxazoline] were ineffective in preventing gallstones. Hyodeoxycholic acid and hyodeoxy-oxazoline [2-(3 alpha,6 alpha-dihydroxy-24-nor-5 beta-cholanyl)-4,4-dimethyl-2- oxazoline] at the same dosage effectively prevented gallstones, while the trihydroxy bile acid, hyocholic acid, was not effective. Of all the dietary regimens tested, only hyodeoxycholic acid significantly lowered serum **cholesterol**. The lithogenic diet produced a five-fold increase in hepatic **HMG-CoA reductase** activity; this activity was not affected by dietary **cholesterol** or beta-**sitosterol**. Hyodeoxycholic acid and hyocholic acid feeding increased the reductase activity by an additional 50% while the other bile acids had no effect. beta-**Sitosterol** doubled the **cholesterol 7 alpha-hydroxylase** activity whereas hyodeoxy-oxazoline lowered it. Hyodeoxycholic acid-fed animals had significantly lower **cholesterol** absorption than the animals on the lithogenic diet alone. Biliary **cholesterol** content increased dramatically in the animals fed the lithogenic diet and was increased still further by ursodeoxycholic acid, hyodeoxycholic acid,

and hyodeoxy-oxazoline. These data show that hyodeoxycholic acid and hyodeoxy-oxazoline do not prevent gallstones by inhibiting hepatic **cholesterol** synthesis or biliary **cholesterol** secretion.

L21 ANSWER 12 OF 36 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:248972 BIOSIS
DOCUMENT NUMBER: PREV200100248972
TITLE: Effects of treatment with deoxycholic acid and chenodeoxycholic acid on the hepatic synthesis of **cholesterol** and bile acids in healthy subjects.
AUTHOR(S): Einarsson, Curt [Reprint author]; Hillebrant, Carl-Gustaf; Axelson, Magnus
CORPORATE SOURCE: Division of Gastroenterology and Hepatology, Huddinge University Hospital, K 63, SE-141 86, Stockholm, Sweden curt.einarsson@medhs.ki.se
SOURCE: Hepatology, (May, 2001) Vol. 33, No. 5, pp. 1189-1193. print.
CODEN: HPTLD9. ISSN: 0270-9139.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 23 May 2001
Last Updated on STN: 19 Feb 2002
ED Entered STN: 23 May 2001
Last Updated on STN: 19 Feb 2002
AB The degradation of **cholesterol** to bile acids is regulated by a negative-feedback mechanism by the bile acids, especially the hydrophobic bile acids, returning to the liver via the portal vein. Chenodeoxycholic acid (CDCA) is a potent suppressor of the **cholesterol** 7alpha-hydroxylase, the rate-determining enzyme in bile acid formation. CDCA may also suppress hepatic **3-hydroxy-3-methyl glutaryl** coenzyme A (**HMG CoA**) **reductase**, the rate-limiting enzyme in **cholesterol** synthesis. Conflicting reports have appeared regarding the suppression on bile acid synthesis by the most hydrophobic bile acid of human bile, deoxycholic acid (DCA). To study the suppressive effects of CDCA and DCA on hepatic **cholesterol** and bile acid synthesis in humans, 10 healthy subjects were treated with CDCA or DCA for 3 weeks in a randomized cross-over study with a washout period of 4 weeks in between. Serum levels of 7alpha-hydroxy-4-cholesten-3-one, reflecting **cholesterol** 7alpha-hydroxylase activity, and 7-**dehydrocholesterol**, reflecting **HMG CoA reductase** activity, and bile acids were repeatedly measured during the study periods. After 3 weeks of treatment with CDCA or DCA, CDCA constituted 70% and DCA 74% of the total serum bile acids, respectively. CDCA and DCA decreased the serum levels of 7alpha-hydroxy-4-cholesten-3-one by 80% and 75%, respectively. Negative correlations between the percentages of CDCA and DCA and the serum concentration of 7alpha-hydroxy-4-cholesten-3-one were obtained. CDCA reduced the serum level of 7-**dehydrocholesterol** by 29%, whereas treatment with DCA tended to increase the level of 7-**dehydrocholesterol**. Treatment of healthy subjects with CDCA and DCA reduces bile acid synthesis. CDCA also inhibits **cholesterol** synthesis, whereas DCA does not.

L21 ANSWER 13 OF 36 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1999:216309 BIOSIS
DOCUMENT NUMBER: PREV199900216309
TITLE: Histologic, hematologic, and biochemical characteristics of apo E-deficient mice: Effects of dietary **cholesterol** and **phytosterols**.
AUTHOR(S): Moghadasian, Mohammed H.; Nguyen, Lien B.; Shefer, Sarah; McManus, Bruce M.; Frohlich, Jiri J. [Reprint author]
CORPORATE SOURCE: Department of Pathology and Laboratory Medicine, St. Paul's

Hospital and University of British Columbia, 1081 Burrard St., Vancouver, BC, V6Z 1Y6, Canada
SOURCE: Laboratory Investigation, (March, 1999) Vol. 79, No. 3, pp. 355-364. print.
CODEN: LAINAW. ISSN: 0023-6837.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 26 May 1999
Last Updated on STN: 26 May 1999
ED Entered STN: 26 May 1999
Last Updated on STN: 26 May 1999
AB In this study, we examined the effects of a "Western-type" diet containing 9% (w/w) fat and 0.15% (w/w) **cholesterol**, in the presence or absence of 2% (w/w) **phytosterol** mixture over an 18-week period in apolipoprotein E-deficient mice. Addition of **phytosterols** to the high **cholesterol** diet was associated with normalization of the depressed hepatic **3-hydroxy-3-methylglutaryl**-coenzyme A reductase activity (from 22.3 +- 6.3 to 55.4 +- 19.9 pmol/mg protein/minutes, $p < 0.05$). This finding was associated with a significant decrease in plasma and hepatic **cholesterol** concentrations compared with animals fed the high **cholesterol** diet without **phytosterols** (33.3 +- 5.0 versus 19.2 +- 6.2 pmol/mg protein, $p < 0.05$). The activities of **cholesterol 7 alpha-hydroxylase** and sterol 27-hydroxylase were comparable between the two groups of mice. Urinalyses and hematologic data were comparable between the two groups except for significantly lower platelet counts in the **phytosterol**-treated animals (681.6 +- 118.9 versus 857.1 +- 185.4 X 109/L, $p < 0.05$). The **phytosterol**-treated animals had significantly ($p < 0.05$) less fragile erythrocytes when exposed to 0.08, 0.07, or 0.05 M NaCl compared with **cholesterol**-fed mice. The consumption of the Western-type diet was associated with the development of xanthomatous skin lesions in 33% of the **cholesterol**-fed animals, but in none of the **phytosterol**-treated animals. Histologic examination revealed oil red O-negative vacuolation in liver and kidney parenchymal cells of the **cholesterol**-fed group, but not in the **phytosterol**-treated mice. Arrested spermatogenesis and atrophy of seminiferous tubules were observed, to a variable extent, in both groups of animals. We conclude that addition of the **phytosterol** mixture (2% w/w) to a Western-type diet in apolipoprotein E-deficient mice significantly decreases plasma and hepatic **cholesterol** concentrations, increases hepatic **3-hydroxy-3-methylglutaryl**-coenzyme A reductase activity, and prevents cutaneous xanthomatosis and vacuolation in the parenchymal cells of kidneys and livers.

L21 ANSWER 14 OF 36 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1993:354929 BIOSIS
DOCUMENT NUMBER: PREV199345038354
TITLE: **Sitosterol** (24-ethylcholesterol) competitively inhibits **cholesterol 7-alpha-hydroxylase** but not **HMG-COA reductase**.
AUTHOR(S): Shefer, S. [Reprint author]; Salen, G.; Bullock, J.; Nguyen, L. B.; Ness, G. C.
CORPORATE SOURCE: Dep. Med., UMD-New Jersey Med. Sch., Newark, NJ, USA
SOURCE: Gastroenterology, (1993) Vol. 104, No. 4 SUPPL., pp. A991. Meeting Info.: 94th Annual Meeting of the American Gastroenterological Association. Boston, Massachusetts, USA. May 15-21, 1993.
CODEN: GASTAB. ISSN: 0016-5085.
DOCUMENT TYPE: Conference; (Meeting)
LANGUAGE: English

ENTRY DATE: Entered STN: 31 Jul 1993
Last Updated on STN: 3 Jan 1995
ED Entered STN: 31 Jul 1993
Last Updated on STN: 3 Jan 1995

L21 ANSWER 15 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:182805 CAPLUS
DOCUMENT NUMBER: 142:274030
TITLE: Methods and compositions comprising fatty acid transport protein 5 (FATP5) for use in the diagnosis and treatment of metabolic disorders, and drug screening methods
INVENTOR(S): Gimeno, Ruth E.; Hubbard, Brian K.
PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005019423	A2	20050303	WO 2004-US26645	20040817
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2005054022	A1	20050310	US 2004-919608	20040817
PRIORITY APPLN. INFO.:			US 2003-496098P	P 20030818

ED Entered STN: 04 Mar 2005
AB The invention provides methods for the identification of agents, e.g., therapeutic agents, that inhibit fatty acid transport protein 5 (FATP5) activity, and methods of treating diseases or conditions associated with FATP5 function, e.g., obesity, insulin resistance, type 2 diabetes, dyslipidemia, fatty liver disease, and cardiovascular disease. Further aspects of the invention provide a transgenic FATP5 non-human knockout mammal, e.g., mouse, useful for elucidating the function of FATP5 in intact animals whose genomes comprise a wild-type FATP5 gene.

L21 ANSWER 16 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:1024340 CAPLUS
DOCUMENT NUMBER: 142:239404
TITLE: Effect of high **plant sterol** -enriched diet and **cholesterol** absorption inhibitor, SCH 58235, on **plant sterol** absorption and plasma concentrations in hypercholesterolemic wild-type Kyoto rats
AUTHOR(S): Batta, Ashok K.; Xu, Guorong; Bollineni, Jaya S.; Shefer, Sarah; Salen, Gerald
CORPORATE SOURCE: Department of Medicine, UMDNJ-NJ Medical School, Newark, NJ, 07103, USA
SOURCE: Metabolism, Clinical and Experimental (2005), 54(1), 38-48
CODEN: METAAJ; ISSN: 0026-0495
PUBLISHER: Elsevier Inc.
DOCUMENT TYPE: Journal

LANGUAGE: English
ED Entered STN: 30 Nov 2004
AB Background and Aims: **Plant sterols** are widely distributed in human diet but are poorly absorbed so that their plasma levels are very low. However, when fed in large amts., they lower plasma **cholesterol** levels by interfering with **cholesterol** absorption. We have studied the effect of 4 wk of feeding a chow diet supplemented with 1% **plant sterols** [**brassicasterol** (6.3%), **campesterol** (28.5%), **stigmasterol** (15.6%) and **sitosterol** (49.6%)], with or without SCH 58235 (a derivative of ezetimibe), 30 mg/kg per day, known to suppress intestinal **cholesterol** absorption, on plasma, tissue, biliary, and fecal sterols in Wistar and wild-type Kyoto (WKY) rats, and their metabolism by intestinal bacteria. Methods: After 2 wk of feeding control or exptl. diet, rats were given [3α-3H] **sitosterol** i.v. and [4-14C]**sitosterol** by mouth, and blood was collected after 1, 2, 3, and 5 days after labeling to determine **sitosterol** absorption. Feces were collected during the last 3 days and freeze dried. At the end of feeding, bile fistulas were created in 3 rats of each strain and bile was collected for 1 h. All rats were then sacrificed and plasma and liver were collected for sterol measurements and activities of hepatic **HMG-CoA reductase, cholesterol 7.alpha.-hydroxylase**, and **cholesterol** 27-hydroxylase. Results: Wild-type Kyoto rats were hypercholesterolemic compared to Wistar rats and had increased **plant sterols** in the plasma. Plasma **cholesterol** tended to be lower in WKY rats after feeding with **plant sterol**-enriched diet whereas **plant sterol** levels rose to approx. 31% of plasma sterols in WKY and 14% in Wistar rats. However, **brassicasterol** and **stigmasterol**, with a double bond at C-22, constituted less than 3.5% of total plasma **plant sterols**. After feeding, biliary **plant sterols** increased 2.25-fold in Wistar and 1.5-fold in WKY rats, suggesting less hepatic clearance in WKY rats. SCH 58235 feeding significantly increased plasma as well as biliary **cholesterol** levels in both the untreated and **plant sterol**-fed WKY rats, and the plasma **plant sterols** showed a tendency to increase but did not reach significant level. Intestinal bacteria in both rat strains metabolized all **plant sterols** to mainly the 5β-H-stanols. However, the C-22 double bond was stable to bacterial degradation Intestinal absorption of **sitosterol** and **cholesterol** was increased 1.5- and 1.3-fold, resp., in the WKY rats as compared to the Wistar rats, and **plant sterol** feeding lowered absorption of these sterols in both strains. Absorption of both these sterols was also lowered in SCH 58235-treated rats in both strains and was further lowered when SCH 58235 and **plant sterols** were simultaneously fed. The activity of the rate-limiting enzyme, **HMG-CoA reductase**, was increased 1.57-fold in Wistar rats and 1.27-fold in WKY rats that were fed **plant sterols** as compared to untreated rats. Conclusions: (1) **Plant sterol** absorption was increased whereas hepatic elimination of all sterols was diminished in WKY rats accounting for elevated **cholesterol** and **plant sterol** levels. (2) The 1% **plant sterol** -enriched diet tended to lower plasma **cholesterol** levels whereas SCH 58235 feeding significantly increased plasma **cholesterol** levels in the WKY rats. (3) Intestinal absorption of sterols with C-22 double bond is diminished and the side-chain double bond is resistant to intestinal bacteria.
REFERENCE COUNT: 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 17 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:10131 CAPLUS

DOCUMENT NUMBER: 140:161638
TITLE: Disturbed **cholesterol** homeostasis in a peroxisome-deficient PEX2 knockout mouse model
AUTHOR(S): Kovacs, Werner J.; Shackelford, Janis E.; Tape, Khanichi N.; Richards, Michael J.; Faust, Phyllis L.; Fliesler, Steven J.; Krisans, Skaidrite K.
CORPORATE SOURCE: Department of Biology, San Diego State University, San Diego, CA, 92182, USA
SOURCE: Molecular and Cellular Biology (2004), 24(1), 1-13
CODEN: MCEBD4; ISSN: 0270-7306
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 07 Jan 2004
AB We evaluated the major pathways of **cholesterol** regulation in the peroxisome-deficient PEX2-/- mouse, a model for Zellweger syndrome. Zellweger syndrome is a lethal inherited disorder characterized by severe defects in peroxisome biogenesis and peroxisomal protein import. Compared with wild-type mice, PEX2-/- mice have decreased total and high-d. lipoprotein **cholesterol** levels in plasma. Hepatic expression of the SREBP-2 gene is increased 2.5-fold in PEX2-/- mice and is associated with increased activities and increased protein and expression levels of SREBP-2-regulated **cholesterol** biosynthetic enzymes. However, the upregulated cholesterogenic enzymes appear to function with altered efficiency, associated with the loss of peroxisomal compartmentalization. The rate of **cholesterol** biosynthesis in 7- to 9-day-old PEX2-/- mice is markedly increased in most tissues, except in the brain and kidneys, where it is reduced. While the **cholesterol** content of most tissues is normal in PEX2-/- mice, in the knockout mouse liver it is decreased by 40% relative to that in control mice. The classic pathway of bile acid biosynthesis is downregulated in PEX2-/- mice. However, expression of CYP27A1, the rate-determining enzyme in the alternate pathway of bile acid synthesis, is upregulated threefold in the PEX2-/- mouse liver. The expression of hepatic ATP-binding cassette (ABC) transporters (ABCA1 and ABCG1) involved in **cholesterol** efflux is not affected in PEX2-/- mice. These data illustrate the diversity in **cholesterol** regulatory responses among different organs in postnatal peroxisome-deficient mice and demonstrate that peroxisomes are critical for maintaining **cholesterol** homeostasis in the neonatal mouse.
REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 18 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:285911 CAPLUS
DOCUMENT NUMBER: 139:50179
TITLE: **Cholesterol** homeostasis
AUTHOR(S): Ness, Gene C.
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, College of Medicine, University of South Florida, Tampa, FL, 33612, USA
SOURCE: Sterols and Oxysterols (2002), 1-14. Editor(s): Fliesler, Steven J. Research Signpost: Trivandrum, India.
CODEN: 69DTPM; ISBN: 81-7736-069-8
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
ED Entered STN: 14 Apr 2003
AB A review. Serum **cholesterol** levels are normally maintained within narrow limits. This is accomplished by the integrated actions of several homeostatic mechanisms. These include: **cholesterol** absorption, **cholesterol** synthesis, **cholesterol** transport, lipoprotein receptor mediated tissue uptake of **cholesterol**, degradation of **cholesterol** to bile acids, and elimination of **cholesterol** from the body. Impairment in any of

these processes can lead to alterations in serum levels and result in significant pathol. Thus, many investigators have sought to understand the mol. basis of these homeostatic processes. Our own work has centered mainly on hepatic **cholesterol** synthesis, bile acid synthesis, and the LDL receptor. In this review we aim to present recent advances in our understanding of these homeostatic processes. Recent studies have demonstrated that there is considerable variation among individuals with respect to the amount of **cholesterol** that they absorb. The role of the ATP binding cassette proteins, ABCG5 and ABCG8, in **cholesterol** efflux from the intestine has been established. A mutation in either of these proteins causes **sitosterolemia**, which results in increased absorption of **cholesterol** and **plant sterols** and reduced excretion of sterols into the bile. Ezetimibe, a selective inhibitor of intestinal absorption of **cholesterol**, is now in phase III studies. An inverse relationship between **cholesterol** absorption and **cholesterol** synthesis has been established. The mechanism by which dietary **cholesterol** feeds back to regulate hepatic **cholesterol** biosynthesis by down regulating the expression of **HMG-CoA reductase** appears to normally involve translational control. The possible participation of oxylanosterols in this regulation has been suggested. A pos. correlation between the rate of **cholesterol** synthesis and response to effective **cholesterol** lowering by statin treatment has been established. A role for hepatic **HMG-CoA reductase** in buffering against the serum **cholesterol** raising action of dietary **cholesterol** has been demonstrated in inbred rats, hamsters, and hormone-deficient animals. The hepatic LDL receptor is markedly and rapidly induced by thyroid hormone. It appears that hepatic **cholesterol** levels may affect LDL receptor activity by altering the rate of cycling of the receptor rather than the steady state level. In liver, a substantial portion of LDL receptors is located in caveolae and associated with caveolin-1. A cytosolic protein that contains a phosphotyrosine-binding domain, which is defective in autosomal recessive hypercholesterolemia, also may bind to the LDL receptor and modulate receptor function in liver but not in fibroblasts. This protein may serve as a LDL receptor adaptor protein. Mutations in either apo B or apo E, ligands for the LDL receptor, result in elevated serum **cholesterol** levels. The thyroid hormone increases the expression of apo A-I leading to higher HDL levels and enhanced reverse **cholesterol** transport. The HDL receptor located in adrenal, ovary, testes, and liver transfers **cholesterol** from HDL into cells by transcytosis. Increased expression of **cholesterol 7.alpha.-hydroxylase** lowers serum **cholesterol** levels even in LDL receptor neg. mice.

REFERENCE COUNT: 82 THERE ARE 82 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 19 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:278745 CAPLUS
DOCUMENT NUMBER: 139:364118
TITLE: Effects of dietary protein quality and quantity on gene expression profiles
AUTHOR(S): Kato, H.; Endo, Y.; Arai, S.
CORPORATE SOURCE: Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo, Japan
SOURCE: Hissu Aminosan Kenkyu (2003), 166, 7-12
CODEN: HAMKE3; ISSN: 0387-4141
PUBLISHER: Hissu Aminosan Kenkyu Iinkai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
ED Entered STN: 11 Apr 2003
AB Rats were fed with a diet containing 12 % casein, 12 % gluten, or no-protein

for 1 wk, and the gene expression profiles in the livers were studied by DNA micro-array method (GeneChip). The gene expressions of growth factors, e.g. IGFBPs and IGF-I, collagen I and III, **cholesterol** metabolism-related enzymes, e.g. **HMG-CoA reductase** and **cholesterol 7.alpha. hydroxylase**, in non-protein and/or gluten diet group were ≥ 2 times higher than casein diet group. The blood **cholesterol** levels in the rats were also studied, and discussed the effect of dietary protein on **cholesterol** metabolism

L21 ANSWER 20 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:429411 CAPLUS
DOCUMENT NUMBER: 137:24317
TITLE: **Cholesterol** lowering supplement containing **phytosterols**
INVENTOR(S): Qi, Chen; De Bont, Hendricus Bartholomeus Andreas; Van der Zee, Luutsche; Lansink, Mirian; Van Norren, Klaske
PATENT ASSIGNEE(S): Neth.
SOURCE: U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002068095	A1	20020606	US 2000-726308	20001201
CA 2430315	AA	20020606	CA 2001-2430315	20011129
WO 2002043506	A2	20020606	WO 2001-NL866	20011129
WO 2002043506	A3	20021003		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002016470	A5	20020611	AU 2002-16470	20011129
EP 1337162	A2	20030827	EP 2001-998234	20011129
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: US 2000-726308 A 20001201
WO 2001-NL866 W 20011129

ED Entered STN: 07 Jun 2002
AB The invention provides a composition and a method for lowering blood serum **cholesterol** levels or for preventing elevated blood serum **cholesterol** levels, as well as suitable composition comprising (a) one or more **phytosterols** and/or **phytostanols** or a mixture thereof capable of reducing **cholesterol** absorption in the intestine, (b) a composition capable of inhibiting **cholesterol** biosynthesis, and (c) a composition capable of increasing **cholesterol** metabolism, wherein at least one of compns. b. and c. is preferably derived from plants. A capsule contained **phytosterol** mist. including brapiscasterol, **campesterol**, **stigmasterol**, and **sitosterol**, Radix Polygoni multiflora estimate, and Flos Chrysanthemi extract

L21 ANSWER 21 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:32338 CAPLUS
DOCUMENT NUMBER: 136:216137
TITLE: Hawthorn fruit is hypolipidemic in rabbits fed a high

cholesterol diet
AUTHOR(S): Zhang, Zesheng; Ho, Walter K. K.; Huang, Yu; James, Anthony E.; Lam, Lik Wang; Chen, Zhen-Yu
CORPORATE SOURCE: Department of Biochemistry, Chinese University of Hong Kong, Hong Kong, Peop. Rep. China
SOURCE: Journal of Nutrition (2002), 132(1), 5-10
CODEN: JONUAI; ISSN: 0022-3166
PUBLISHER: American Society for Nutritional Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 13 Jan 2002
AB New Zealand white male rabbits were fed diet with no **cholesterol** added (NC), high-**cholesterol** diet (HC, 1 g/100 g feed), and HC diet with 2 g hawthorn fruit powder/100 g feed (HC-H) for 12 wk. Blood serum total **cholesterol** (TC) and triacylglycerol (TG) levels were decreased 23.4 and 22.2%, resp., in the HC-H vs. HC group. Hawthorn feeding led to 50.6% decrease in **cholesterol** accumulation in the aorta and 23-95% greater excretion of neutral and acidic sterols. Hawthorn feeding did not affect the activities of hepatic **3-hydroxy-3-methylglutaryl** CoA reductase or **cholesterol 7.alpha.-hydroxylase** (CH), but it decreased the activity of intestinal acyl CoA: **cholesterol** acyltransferase (ACAT). The mechanism by which dietary hawthorn fruit may decrease blood serum **cholesterol** levels may involve inhibition of **cholesterol** absorption mediated by down-regulation of intestinal ACAT enzyme activity.
REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 22 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:442984 CAPLUS
DOCUMENT NUMBER: 135:180195
TITLE: Dietary plant stanol esters reduce VLDL **cholesterol** secretion and bile saturation in apolipoprotein E*3-Leiden transgenic mice
AUTHOR(S): Volger, Oscar L.; Van der Boom, Hans; De Wit, Elly C. M.; Van Duyvenvoorde, Wim; Hornstra, Gerard; Plat, Jogchum; Havekes, Louis M.; Mensink, Ronald P.; Princen, Hans M. G.
CORPORATE SOURCE: Department of Human Biology, Maastricht University, Maastricht, 6200 MD, Neth.
SOURCE: Arteriosclerosis, Thrombosis, and Vascular Biology (2001), 21(6), 1046-1052
CODEN: ATVBFA; ISSN: 1079-5642
PUBLISHER: Lippincott Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 20 Jun 2001
AB Dietary plant stanols decrease blood serum **cholesterol** levels in humans and in hyperlipidemic rodents mainly by inhibiting intestinal **cholesterol** absorption. Female apolipoprotein E*3-Leiden transgenic mice were used to investigate the consequences of this effect on serum lipid levels and hepatic lipid metabolism Five groups of 6-7 mice were fed for 9 wk diets containing 0.25% **cholesterol** and 0 (control), 0.25, 0.5, 0.75, or 1.0% plant stanol (88% **sitostanol**, 10% **campestanol**) fatty acid esters. Compared with the control diet, plant stanol ester diets dose-dependently decreased blood serum **cholesterol** levels by 10-33%, mainly in very-low-d. lipoproteins (VLDL), intermediate-d. lipoproteins, and low-d. lipoproteins. The 1.0% stanol diet decreased the liver contents of cholesteryl esters by 62%, free **cholesterol** by 31%, and triglycerides by 38%, but did not change the hepatic VLDL-triglyceride and VLDL-apolipoprotein B production rates. The stanol diets decreased the amts. of cholesteryl esters and free **cholesterol** incorporated in nascent VLDL by 72 and 30%,

resp., resulting in a net 2-fold decreased VLDL-**cholesterol** output. Liver mRNA levels of low-d. lipoprotein receptors, **3-hydroxy-3-methylglutaryl** CoA synthase, **cholesterol 7.alpha.-hydroxylase**, and sterol 27-hydroxylase were not changed by the stanol ester feeding. The serum lathosterol/**cholesterol** ratio was increased by 23%, indicating that dietary plant stanol esters increased the whole-body **cholesterol** synthesis. The stanol esters also decreased the **cholesterol** saturation index in bile by 55%. Thus, in apolipoprotein E*3-Leiden transgenic mice, dietary plant stanol esters dose-dependently lowered blood serum **cholesterol** levels via decreased secretion of VLDL-**cholesterol**. This was caused by decreased hepatic **cholesterol** content that also led to decreased biliary **cholesterol** output, indicative of decreased lithogenicity of bile in these mice.

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 23 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:176368 CAPLUS
DOCUMENT NUMBER: 134:295127
TITLE: Feeding unsaponifiable compounds from rice bran oil does not alter hepatic mRNA abundance for **cholesterol** metabolism-related proteins in hypercholesterolemic rats
AUTHOR(S): Nagao, Koji; Sato, Masao; Takenaka, Miyuki; Ando, Miyuki; Iwamoto, Masako; Imaizumi, Katsumi
CORPORATE SOURCE: Laboratory of Nutrition Chemistry, Division of Bioscience and Biotechnology, Faculty of Agriculture, Graduate School Kyushu University, Fukuoka, 812-8581, Japan
SOURCE: Bioscience, Biotechnology, and Biochemistry (2001), 65(2), 371-377
CODEN: BBBIEJ; ISSN: 0916-8451
PUBLISHER: Japan Society for Bioscience, Biotechnology, and Agrochemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 15 Mar 2001
AB The hypocholesterolemic effects of rice bran oil (RBO) have been defined in human and animal expts. and indicate the presence of active component(s) in the oil unsaponifiable fraction, but the mechanism of action is not known. Exogenously hypercholesterolemic (ExHC) rats were fed for 2 wk a 0.5% **cholesterol** diet with 10% RBO, RBO-simulating oil (RBOSO) in its fatty acid composition, or RBOSO plus 0.25% unsaponifiable compds. (UC) from RBO. Rats fed RBO or UC had decreased blood serum and liver **cholesterol** concns. and no decrease in high-d. lipoprotein **cholesterol** levels. Dietary RBO and UC elevated fecal neutral sterol excretion, but no significant changes in fecal bile acid excretion or hepatic abundance of mRNA for **3-hydroxy-3-methylglutaryl**-CoA reductase, **cholesterol-7.alpha.-hydroxylase**, and low-d. lipoprotein receptor were seen. Blood serum and liver α-tocopherol concns. were decreased in RBO or UC fed rats. Thus, the UC in RBO can decrease blood serum **cholesterol** concns. by interrupting the absorption of intestinal hydrophobic compds. rather than by modifying **cholesterol** metabolism in the liver.
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 24 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:161935 CAPLUS
DOCUMENT NUMBER: 134:207214
TITLE: Effect of dietary wine polyphenol and docosahexaenoic

acid on modulation of lipid metabolism by oxidized **cholesterol** in rats

AUTHOR(S): Ogino, Yamato; Yamazaki, Harumi; Osada, Kyoichi; Nakamura, Shingo; Yamaya, Osamu; Sugano, Michihiro

CORPORATE SOURCE: Fac. Agric. Life Sci., Hirosaki Univ., 3 Bunkyo-cho, Hiosaki, Aomori, 036-8152, Japan

SOURCE: Nippon Eiyo, Shokuryo Gakkaishi (2001), 54(1), 19-28
CODEN: NESGDC; ISSN: 0287-3516

PUBLISHER: Nippon Eiyo, Shokuryo Gakkai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

ED Entered STN: 07 Mar 2001

AB Exogenous oxidized **cholesterol** (OxChol) has deleterious effects on lipid metabolism We therefore examined the effect of simultaneous consumption of wine polyphenol (WPP) and fish oil containing a high level of docosahexaenoic acid (DHA) in rats fed OxChol. The inhibition of hepatic **cholesterol** biosynthesis by exogenous OxChol was slightly alleviated by the consumption of both WPP and DHA. The activity of hepatic **cholesterol 7.alpha.-hydroxylase** tended to be higher in rats fed both WPP and DHA than in those fed the control diet without polyphenol containing safflower oil as dietary fat. On the other hand, dietary WPP and DHA lowered hepatic Δ6 desaturase activity compared with that in the control group. Moreover, the level of OxChol excreted in feces was significantly higher in rats fed both WPP and DHA than in those fed the control diet. Thus, the simultaneous consumption of both WPP and DHA seems to alleviate the modulation of lipid metabolism by dietary OxChol, possibly through a combination of both the inhibition of OxChol absorption from the small intestine by WPP and the modulation of lipid metabolism by DHA.

L21 ANSWER 25 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:557264 CAPLUS

DOCUMENT NUMBER: 129:275249

TITLE: Dietary oxidized **cholesterol** modulates **cholesterol** metabolism and linoleic acid desaturation in rats fed high-**cholesterol** diets

AUTHOR(S): Osada, Kyoichi; Kodama, Takehiro; Yamada, Koji; Nakamura, Shingo; Sugano, Michihiro

CORPORATE SOURCE: Laboratory of Science of Bioproducts, Faculty of Agriculture, Hirosaki University, Hirosaki, 036, Japan

SOURCE: Lipids (1998), 33(8), 757-764
CODEN: LPDSAP; ISSN: 0024-4201

PUBLISHER: AOCS Press

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 02 Sep 1998

AB The interactive effects of high dietary levels of oxidized **cholesterol** on exogenous **cholesterol** and linoleic acid metabolism were examined in male 4-wk-old Sprague-Dawley rats fed high-**cholesterol** diets. The rats were pair-fed purified diets with 0.5% **cholesterol** alone or with 0.5% **cholesterol** plus 0.5% oxidized **cholesterol** mixture (containing 93% oxidized **cholesterol**) for 3 wk. Hepatic **3-hydroxy-3-methylglutaryl** CoA reductase activity decreased in rats fed **cholesterol** alone or **cholesterol** plus oxidized **cholesterol**. The hepatic **cholesterol 7.alpha.-hydroxylase** activity was lowered only when the rats were fed **cholesterol** plus oxidized **cholesterol**, while the dietary **cholesterol** fed alone increased this activity. Reflecting this effect, the acidic steroid excretion was lowest in rats fed **cholesterol** plus oxidized **cholesterol**. The activity of hepatic Δ6 desaturase, a key enzyme in the metabolism of linoleic acid to arachidonic acid, was increased

in rats fed **cholesterol** plus oxidized **cholesterol**, while the dietary **cholesterol** fed alone lowered its activity. The Δ6 desatn. index, (20:3n-6 + 20:4n-6)/18:2n-6, in the liver and blood serum phospholipids tended to be higher in the group fed **cholesterol** plus oxidized **cholesterol** than in rats fed **cholesterol** alone. Thus, dietary oxidized **cholesterol** modulated exogenous **cholesterol** metabolism and promoted linoleic acid desatn. even when it was fed at high levels together with high-**cholesterol** diet.

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 26 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:324209 CAPLUS
DOCUMENT NUMBER: 129:40550
TITLE: **Cholesterol** inhibits bile acid synthesis in New Zealand white and Watanabe heritable hyperlipidemic rabbits
AUTHOR(S): Salen, G.; Xu, G.; Shefer, S.; Ness, G. C.; Parker, T. S.
CORPORATE SOURCE: Div. Gastroenterol, New Jersey Medical Sch., Newark, NJ, 07103-2757, USA
SOURCE: Falk Symposium (1996), 84(Bile Acids, Cholestasis, Gallstones), 3-12
CODEN: FASYDI; ISSN: 0161-5580
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 01 Jun 1998
AB Plasma **cholesterol** levels were 9.9 times greater in Watanabe heritable hyperlipidemic (WHHL) than New Zealand white (NZW) rabbits fed a control diet devoid of **cholesterol**. A 0.2 **cholesterol** diet increased plasma **cholesterol** .apprx.2-fold in both rabbit groups, and the exptl. 2% **cholesterol** diet increased plasma **cholesterol** 26-fold in the NZW rabbits after 10 days. Liver **cholesterol** levels were also increased, and **HMG-CoA reductase** and **cholesterol 7. alpha.-hydroxylase** were decreased by increasing dietary **cholesterol** levels. The mRNAs for the 2 enzymes were decreased by the 2% **cholesterol** diet only in NZW rabbits, but tended to be higher in these rabbits than in WHHL rabbits, leading to reduced **cholesterol** metabolism and bile acid synthesis in the latter rabbits. Effects of 0.2% dietary **sitosterol** are also discussed.
REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 27 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:532921 CAPLUS
DOCUMENT NUMBER: 121:132921
TITLE: Effects of dietary oxidized **cholesterol** on lipid metabolism in differently aged rats
AUTHOR(S): Osada, Kyoichi; Kodama, Takehiro; Cui, Li; Ito, Yuji; Sugano, Michihiro
CORPORATE SOURCE: School Agriculture, Kyushu Univ., Fukuoka, 812, Japan
SOURCE: Bioscience, Biotechnology, and Biochemistry (1994), 58(6), 1062-9
CODEN: BBBIEJ; ISSN: 0916-8451
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 17 Sep 1994
AB Male Sprague-Dawley rats, 4 wk (young) or 8 mo (adult) of age, were fed one of three purified diets free of or containing either 0.5% **cholesterol** or 0.5% oxidized **cholesterol** (92% oxidized **cholesterol**) for 3 wk. Feeding of oxidized **cholesterol**

caused a significant reduction of food intake, body weight gain, and relative liver weight in rats of both ages. The activity of the **HMG-CoA reductase** and **cholesterol 7.alpha.-hydroxylase** of liver microsomes, the key enzymes in **cholesterol** synthesis and catabolism, resp., was lowered by oxidized **cholesterol** compared to the diet free of **cholesterol** in both ages, and the difference was significantly in the adult. On the other hand, the activity of Δ6-desaturase of liver microsomes, a key enzyme in linoleic acid metabolism to arachidonic acid, was significantly increased by oxidized **cholesterol** in adult rats, leading to the increase in linoleic acid desatn. index [(20:3n-6 + 20:4n-6)/18:2n-6] in liver phospholipids. Oxidized **cholesterol** reduced the concentration of **cholesterol** in serum and liver. Also, the fecal excretion of acidic steroids was lower in rats fed the oxidized **cholesterol** diet than in those fed the **cholesterol**-free diet. Thus, oxidized **cholesterol** significantly influenced **cholesterol** and fatty acid metabolism in particular in adult rats.

L21 ANSWER 28 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:464497 CAPLUS
DOCUMENT NUMBER: 115:64497
TITLE: Rapid suppression of bile acid synthesis by drugs which inhibit **cholesterol** synthesis
AUTHOR(S): Vlahcevic, Z. R.; Pandak, W. M.; Heuman, D. M.; Hylemon, P. B.
CORPORATE SOURCE: Med. Coll. Virginia, Virginia Commonw. Univ., Richmond, VA, USA
SOURCE: International Congress Series (1990), 905(Drugs Affecting Lipid Metab. X), 563-71
CODEN: EXMDA4; ISSN: 0531-5131
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 23 Aug 1991
AB In rats with chronic fistula, down-regulation of **cholesterol 7.alpha.-hydroxylase** activity and inhibition of bile acid synthesis take place following inhibition of **HMG-CoA-reductase** (an early step in **cholesterol** biosynthesis) and 7-**dehydrocholesterol** reductase (a late step in **cholesterol** synthesis). Down-regulation of **cholesterol 7.alpha.-hydroxylase** occurs rapidly (at 1.5 h) following administration of either a bolus dose of mevinolinic acid (MVA) or AY9944. The maximal down-regulation in activity of this enzyme was evident at 3 h following administration of either MVA (52%) and at 1.5 h following administration of AY9944 (44%), compared to control rats. Addition of MVA and AY9944 in high concentration to the microsomes did not decrease **cholesterol 7.alpha.-hydroxylase** activity, suggesting that neither compound has a direct effect on the enzyme. These data provide evidence for the importance of newly synthesized **cholesterol** in the regulation of **cholesterol 7.alpha.-hydroxylase** activity and bile acid synthesis.

L21 ANSWER 29 OF 36 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1973:533323 CAPLUS
DOCUMENT NUMBER: 79:133323
TITLE: Regulatory effects of sterols and bile acids on hepatic **3-hydroxy-3-methylglutaryl** CoA reductase and **cholesterol 7.alpha.-hydroxylase** in the rat
AUTHOR(S): Shefer, S.; Hauser, S.; Lapar, V.; Mosbach, E. H.
CORPORATE SOURCE: Public Health Res. Inst., City of New York, Inc., New York, NY, USA

SOURCE: Journal of Lipid Research (1973), 14(5), 573-80
CODEN: JLPRAW; ISSN: 0022-2275
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 May 1984
AB The administration of bile acids (taurocholate [81-24-3], taurodeoxycholate [516-50-7], and taurochenodeoxycholate [516-35-8]) at 1% of the diet to rats for 1 week decreased the activity of hepatic microsomal **3-hydroxy-3-methylglutaryl** CoA reductase (**HMG CoA reductase**) [9028-35-7]. Taurocholate and taurodeoxycholate, but not taurochenodeoxycholate, inhibited **cholesterol 7.alpha.-hydroxylase** [9037-53-0]. Dietary **sitosterol** [83-46-5] increased the specific activity of **HMG CoA reductase** and **cholesterol 7.alpha.-hydroxylase**, and biliary **cholesterol** [57-88-5] concns. Compared with controls fed the stock diet, the simultaneous administration of **sitosterol** and taurochenodeoxycholate decreased **HMG CoA reductase** activity by 60%. **Sitosterol** and taurocholate given together to rats inhibited **cholesterol 7.alpha.-hydroxylase** activity. In all groups receiving bile acids, biliary secretion of bile acids was nearly doubled and bile acid composition was shifted in the direction of the administered bile acid. The composition of the bile acid pool seems to influence the hepatic concns. of the rate-controlling enzymes of bile acid synthesis.

L21 ANSWER 30 OF 36 EMBASE
on STN
ACCESSION NUMBER: 95199701 EMBASE
DOCUMENT NUMBER: 1995199701
TITLE: Regulation of **cholesterol 7.alpha.-hydroxylase** expression by sterols in primary rat hepatocyte cultures.
AUTHOR: Doerner K.C.; Gurley E.C.; Vlahcevic Z.R.; Hylemon P.B.
CORPORATE SOURCE: Department of Immunology, Medical College of Virginia,Richmond, VA 23298, United States
SOURCE: Journal of Lipid Research, (1995) Vol. 36, No. 6, pp. 1168-1177.
ISSN: 0022-2275 CODEN: JLPRAW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 950727
Last Updated on STN: 950727
ED Entered STN: 950727
Last Updated on STN: 950727
AB The importance of **cholesterol** and 'oxysterols' in the regulation of **cholesterol 7.alpha.-hydroxylase** is not clear. Previous in vivo studies suggest that **cholesterol** may up-regulate **cholesterol 7.alpha.-hydroxylase**, the rate- limiting enzyme in bile acid biosynthesis, but these studies are open to question as they were carried out in whole animals. Therefore, we used primary rat hepatocytes, cultured in serum-free medium, to determine the effects of **cholesterol** on the regulation of **cholesterol 7.alpha.-hydroxylase**. Squalestatin, a specific **squalene synthase** inhibitor, was used to block sterol but not isoprenoid biosynthesis in this system. Squalestatin (1 μM) decreased **cholesterol 7.alpha.-hydroxylase** specific activity to undetectable levels and decreased steady-state mRNA and transcriptional activity to 13% and 47% of controls, respectively.

Mevalonolactone (2 mM) failed to restore **cholesterol** 7 **.alpha.-hydroxylase** specific activity or steady-state mRNA levels in squalestatin-treated cells. Addition of **cholesterol**, delivered in β- cyclodextrin, to squalestatin-treated cells restored **cholesterol** 7. **alpha.- hydroxylase** specific activity and steady-state mRNA to control levels in a concentration (25 μM to 200 μM)-dependent manner. In contrast, the individual addition of selected 'oxysterols' (5-cholesten-3β,7α-diol; 5α-cholesten-3β,6α-diol; cholestan-3β, 5α,6β-triol; 5-(25R)-cholesten- 3β,26-diol, all at 50 μM) failed to restore **cholesterol 7.alpha.-hydroxylase** mRNA levels in squalestatin-treated cells. These experiments provide evidence that **cholesterol** rather than 'oxysterols' regulate **cholesterol 7.alpha.- hydroxylase** gene expression. Squalestatin (1 μM) treatment increased **HMG - CoA reductase** specific activity by 229% of controls. Addition of **cholesterol** (200 μM), but not mevalonolactone (2 mM), to squalestatin-treated cells decreased **HMG-CoA reductase** specific activity to 19% of control. The primary rat hepatocyte culture system in conjunction with a specific squalene synthetase inhibitor should be a useful model for elucidating the mechanism of regulation of **cholesterol 7.alpha .-hydroxylase** gene expression by sterols.

L21 ANSWER 31 OF 36 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 86254027 EMBASE
DOCUMENT NUMBER: 1986254027
TITLE: Parameters of **cholesterol** metabolism in the human hepatoma cell line, Hep-G2.
AUTHOR: Erickson S.K.; Fielding P.E.
CORPORATE SOURCE: Cardiovascular Research Institute, University of California School of Medicine, San Francisco, CA 94143, United States
SOURCE: Journal of Lipid Research, (1986) Vol. 27, No. 8, pp. 875-883.
CODEN: JLPRAW
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 029 Clinical Biochemistry
016 Cancer
LANGUAGE: English
ENTRY DATE: Entered STN: 911210
Last Updated on STN: 911210

ED Entered STN: 911210
Last Updated on STN: 911210

AB The human hepatoma cell line Hep-G2 has been shown to express the major enzymes of intra- and extracellular **cholesterol** metabolism. These include lecithin:**cholesterol** acyltransferase, acyl coenzyme A:**cholesterol** acyltransferase, **3-hydroxy-3-methylglutaryl** coenzyme A reductase, and **cholesterol-7.alpha.-hydroxylase** . Regulatory mechanisms that have been described in other hepatic systems also appear to be active in Hep-G2 cells: perturbations of **cholesterol** and triglyceride metabolism affected the enzyme activities and the accumulation of specific apolipoproteins in the culture media. The results indicate that studies of Hep-G2 cells may provide useful information for the elucidation of mechanisms of regulation of human hepatocyte **cholesterol**, lipoprotein, and biliary metabolism.

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ACCESSION NUMBER: 83118221 EMBASE

DOCUMENT NUMBER: 1983118221
TITLE: Early morphologic and enzymatic changes in livers of rats treated with chenodeoxycholic and ursodeoxycholic acids.
AUTHOR: Shefer S.; Zaki F.G.; Salen G.
CORPORATE SOURCE: Dep. Med., Univ. Med. Dent. New Jersey/New Jersey Med. Sch., Newark, NJ 07103, United States
SOURCE: Hepatology, (1983) Vol. 3, No. 2, pp. 201-208.
CODEN: HPTLD
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
048 Gastroenterology
005 General Pathology and Pathological Anatomy
029 Clinical Biochemistry
LANGUAGE: English
ENTRY DATE: Entered STN: 911209
Last Updated on STN: 911209
ED Entered STN: 911209
Last Updated on STN: 911209
AB The effect of high doses of chenodeoxycholic and ursodeoxycholic acids on hepatic morphology and on **cholesterol** and bile acid metabolism was examined in the rat. After 2 weeks of either cheno- or ursodeoxycholic acid feeding, the livers of the treated rats revealed marked proliferation of the smooth endoplasmic reticulum which appeared as an adaptation phenomenon of the microsomal enzyme system in response to bile acid intake. However, the livers of the chenodeoxycholic acid-treated rats showed early alteration that included mild triaditis, swelling of the bile canalicular microvilli, distended Golgi vesicles, whorling of the mitochondria, and presence of large vacuoles bound by single membranes. During cheno- or ursodeoxycholic acid treatment, the administered bile acid predominated in the bile and amounted to 79 or 67% of the biliary bile acids, respectively. At the same time, the concentration of the muricholic acids was also increased. Biliary cholic acid content dropped significantly, but no change in lithocholic acid concentration was observed. In addition, the activity of **HMG-CoA reductase** as well as that of **cholesterol-7.alpha.-hydroxylase** was reduced by either of the administered bile acids, while no change in hepatic **cholesterol** content was detected, and intestinal **cholesterol** absorption was not significantly different from that of controls. These results show that cheno- and ursodeoxycholic acids inhibited hepatic **cholesterol** and bile acid synthesis but did not increase either intestinal **cholesterol** absorption or hepatic microsomal **cholesterol** content. Since the amounts of biliary lithocholic acid were similar in the bile acid-treated animals, the morphologic abnormalities detected in the chenodeoxycholic acid-fed rats are probably due to an increased pool of chenodeoxycholic acid. However, lithocholic acid-induced liver injury cannot be excluded.

L21 ANSWER 33 OF 36 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 82130856 EMBASE
DOCUMENT NUMBER: 1982130856
TITLE: Hepatic **cholesterol** absorption in patients with gallstones. Effect of cicloxilic acid: A preliminary report.
AUTHOR: Carulli N.; Ponz de Leon M.; Iori R.; et al.
CORPORATE SOURCE: Ist. Clin. Med. II, Univ. Modena, Italy
SOURCE: Italian Journal of Gastroenterology, (1981) Vol. 13, No. 4, pp. 239-343.
CODEN: ITJGDH
COUNTRY: Italy
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index

048 Gastroenterology
003 Endocrinology
006 Internal Medicine
029 Clinical Biochemistry
030 Pharmacology
LANGUAGE: English
SUMMARY LANGUAGE: Italian
ENTRY DATE: Entered STN: 911209
Last Updated on STN: 911209
ED Entered STN: 911209
Last Updated on STN: 911209
AB It has been shown that cicloxillic acid, a hydrocholeretic agent, may lower bile **cholesterol** saturation. To further elucidate the responsible mechanism, the effect of cicloxilic acid on **cholesterol** absorption and hepatic sterol metabolism was investigated in 10 gallstone patients. The compound was given orally for 2-3 weeks at a dose of 240 mg/day. In 5 subjects, **cholesterol** absorption was evaluated before and at the end of the treatment, each patient acting as his own control. In the remaining 5 subjects surgical liver biopsies were obtained during cholecystectomy, performed at the end of treatment. **HMG-CoA reductase, 7 .alpha.-hydroxylase** activities and microsomal **cholesterol** were estimated in the liver specimen. Bile lipid and bile acid composition were estimated in all patients before and after treatment. Mean basal saturation index (1.41 ± 0.23) fell significantly (P<0.01) to 1.17 ± 0.11 after treatment. Biliary bile acid composition was unaffected by treatment. Mean **cholesterol** absorption after treatment did not differ from the basal value. Similarly, the values of **HMG-CoA reductase** (64.5 ± 22.3 p. mol/min. mg protein), **7.alpha.-hydroxylase** (29.5 ± 4.3 p. mol/min/mg protein) and microsomal **cholesterol** (69.2 ± 13.5 ng/mg protein) observed after treatment were comparable to those found in untreated controls. It is suggested that the efficacy of cicloxilic acid in lowering biliary **cholesterol** saturation is not mediated by changes in the absorption or hepatic synthesis of **cholesterol**.

L21 ANSWER 34 OF 36 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 80202000 EMBASE
DOCUMENT NUMBER: 1980202000
TITLE: Effect of neonatal modulation of **cholesterol** homeostasis on subsequent response to **cholesterol** challenge in adult guinea pig.
AUTHOR: Li J.R.; Bale L.K.; Kottke B.A.
CORPORATE SOURCE: Cardiovasc. Res. Unit, Mayo Clin. Found., Rochester, Minn. 55901, United States
SOURCE: Journal of Clinical Investigation, (1980) Vol. 65, No. 5, pp. 1060-1068.
CODEN: JCINAO
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
029 Clinical Biochemistry
LANGUAGE: English
ENTRY DATE: Entered STN: 911209
Last Updated on STN: 911209
ED Entered STN: 911209
Last Updated on STN: 911209
AB Experiments were designed to study whether or not the mechanism of handling dietary **cholesterol** in adulthood can be modulated by the manipulation of **cholesterol** homeostasis during neonatal period. The effects of enhancing **cholesterol** degradation (cholestyramine feeding), high dietary **cholesterol** intake, and

early weaning during neonatal period of guinea pigs on their subsequent plasma **cholesterol** levels and the response to dietary **cholesterol** challenged in adulthood were investigated. Pretreatment of neonatal guinea pigs with cholestyramine resulted in (a) a lower plasma **cholesterol** level, (b) an increased excretion rate of fecal bile acids and total steroids, (c) an expanded bile acid pool, (d) an increased activity of **cholesterol 7. alpha.-hydroxylase**, and (e) no change in the hepatic 3-hydroxy-3-methylglutarly coenzyme A (CoA) reductase activity when challenged with **cholesterol** in adulthood. **Cholesterol** pretreatment during neonatal period resulted in (a) no alteration in the plasma **cholesterol** level, (b) no alteration in the fecal excretion of steroids, or (c) no alteration in the **cholesterol 7.alpha.-hydroxylase** activity when they were challenged with a high **cholesterol** diet. Early weaning did not influence the fecal excretion of steroids or **cholesterol 7.alpha.-hydroxylase** activity but resulted in a slight decrease in the hepatic **3-hydroxy-3 -methylglutaryl**-CoA reductase activity when they were challenged with a high **cholesterol** diet. These results suggest that stimulation of **cholesterol** catabolism rather than **cholesterol** feeding or early weaning during neonatal period can influence the response to dietary **cholesterol** challenge in adulthood.

L21 ANSWER 35 OF 36 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 78122812 EMBASE
DOCUMENT NUMBER: 1978122812
TITLE: Effects of cholestyramine on **cholesterol** balance parameters and hepatic **HMG CoA reductase** and **cholesterol 7 . alpha. hydroxylase** activities in swine.
AUTHOR: Kim D.N.; Rogers D.H.; Li J.R.; et al.
CORPORATE SOURCE: Dept. Pathol., Neill Hellman Med. Res. Bldg, Albany Med. Coll., Albany, N.Y. 12208, United States
SOURCE: Experimental and Molecular Pathology, (1977) Vol. 26, No. 3, pp. 434-447.
CODEN: EXMPA6
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
005 General Pathology and Pathological Anatomy
029 Clinical Biochemistry
LANGUAGE: English

AB Effects of cholestyramine treatment for 75 days on whole body **cholesterol** balance and hepatic **HMG CoA reductase** and **cholesterol 7 .alpha. hydroxylase** activities were studied in hypercholesterolemic swine. Sixteen male Yorkshire swine (10 kg) were divided into 4 groups; 3 groups were fed a high **cholesterol** (HC) diet for 50 days. One group was then switched to mash, the second was given cholestyramine, 12 g daily, and the third was left on the high **cholesterol** diet, all for an additional 75 days. The fourth group was maintained on mash throughout the 125 days. Data for the **cholesterol** balance parameters, retention, excretion, and synthesis, were obtained during the terminal week. Hepatic **HMG CoA reductase** and **cholesterol 7 .alpha. hydroxylase** activities were assayed terminally. Cholestyramine reduced serum **cholesterol** concentrations in hypercholesterolemic swine very effectively although the reduction was not as complete as in those swine switched to mash diet. The drug also reduced whole body **cholesterol** retention. These changes appeared to be due to increases in both acidic and neutral steroids in the feces. Accompanying

increases in whole body **cholesterol** synthesis probably partially offset the beneficial effect of increased steroid excretions. In vitro hepatic **HMG CoA reductase** activities correlated well with whole body **cholesterol** synthesis determined by the balance method as well as with fecal steroid excretions. **Cholesterol 7 .alpha. hydroxylase** activities of the liver microsomes correlated well with the amount of fecal bile acid excretion.

L21 ANSWER 36 OF 36 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2002-479986 [51] WPIDS
DOC. NO. CPI: C2002-136636
TITLE: Composition useful in food product, comprises **phytosterol** and/or **phytostanol** and/or soluble fiber, composition capable of inhibiting **cholesterol** biosynthesis and composition capable of increasing **cholesterol** metabolism.
DERWENT CLASS: B05 D13
INVENTOR(S): DE BONT, H B A; LANSINK, M; QI, C; VAN DER ZEE, L; VAN NORREN, K; CHEN, Q; VAN DER BURGT, L M J
PATENT ASSIGNEE(S): (NUTR-N) NUTRICIA NV; (DBON-I) DE BONT H B A; (LANS-I) LANSINK M; (QICC-I) QI C; (VZEE-I) VAN DER ZEE L; (VNOR-I) VAN NORREN K
COUNTRY COUNT: 100
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002043506	A2	20020606	(200251)*	EN	20
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
US 2002068095	A1	20020606	(200251)		
AU 2002016470	A	20020611	(200264)		
EP 1337162	A2	20030827	(200357)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002043506	A2	WO 2001-NL866	20011129
US 2002068095	A1	US 2000-726308	20001201
AU 2002016470	A	AU 2002-16470	20011129
EP 1337162	A2	EP 2001-998234	20011129
		WO 2001-NL866	20011129

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2002016470	A	Based on	WO 2002043506
EP 1337162	A2	Based on	WO 2002043506

PRIORITY APPLN. INFO: US 2000-726308 20001201
ED 20020812
AN 2002-479986 [51] WPIDS
AB WO 200243506 A UPAB: 20021031
NOVELTY - A composition (I) comprises:
(a) at least one **phytosterol** and/or **phytostanol**

capable of reducing **cholesterol** absorption in the intestine and/or at least one soluble fiber capable of inhibiting ileal bile acid absorption;

(b) a composition capable of inhibiting **cholesterol** biosynthesis; and

(c) a composition capable of increasing **cholesterol** metabolism.

At least one of (b) and (c) is derived from plants.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for reducing serum **cholesterol** levels or preventing elevated blood serum **cholesterol** levels involving administering:

(a) at least one **phytosterol** and/or **phytostanol** (at least 10 mg/day) capable of reducing **cholesterol** absorption in the intestine, and/or at least one soluble fiber (at least 200 mg/day) capable of inhibiting ileal bile acid absorption;

(b) a plant-derived composition capable of inhibiting **cholesterol** biosynthesis; and

(c) a plant-derived composition capable of increasing **cholesterol** metabolism.

ACTIVITY - Anticholesterol. No test data provided.

MECHANISM OF ACTION - **HMG-CoA-Reductase**-Inhibitor; **Squalene-Synthase**-Inhibitor. No test data provided.

USE - In food or beverage products, nutritional supplements, tablets, capsules, microbeads, emulsions, powders, granules, suspensions, syrups, elixirs and chewing gums and for reducing serum **cholesterol** levels or preventing elevated blood serum **cholesterol** levels (claimed).

ADVANTAGE - The composition can be administered for a longer period and avoids the potential side effects or compensatory effects associated with the administration of relatively high levels of components solely directed at reducing **cholesterol** absorption in the intestine or at inhibiting **cholesterol** synthesis or at increasing **cholesterol** metabolism or at only two of these three mechanisms.

Dwg.0/0

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=> file stnguide
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    416.90     417.11

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -11.68     -11.68

FILE 'STNGUIDE' ENTERED AT 09:17:43 ON 06 APR 2005
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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Apr  1, 2005 (20050401/UP).

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ENTER L#, L# RANGE, ALL, OR (END):end

=> file caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
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FULL ESTIMATED COST                                      0.90     418.01

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
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CA SUBSCRIBER PRICE 0.00 -11.68

FILE 'CAPLUS' ENTERED AT 09:26:38 ON 06 APR 2005
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FILE COVERS 1907 - 6 Apr 2005 VOL 142 ISS 15
FILE LAST UPDATED: 5 Apr 2005 (20050405/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> e chen qi/au
E1          33     CHEN Q Z/AU
E2           1     CHEN QANQING/AU
E3         499 --> CHEN QI/AU
E4          10     CHEN QI AN/AU
E5           3     CHEN QI BIAO/AU
E6           5     CHEN QI BIN/AU
E7           2     CHEN QI BING/AU
E8           1     CHEN QI BO/AU
E9           2     CHEN QI CAI/AU
E10          1     CHEN QI CIAN/AU
E11          3     CHEN QI DAI/AU
E12          4     CHEN QI DAN/AU

=> s e3
L22        499 "CHEN QI"/AU

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E1           1     QI CHAOYING/AU
E2           1     QI CHAUANMIN/AU
E3          24 --> QI CHEN/AU
E4           4     QI CHEN F/AU
E5          19     QI CHEN FENG/AU
E6           6     QI CHEN ZE/AU
E7           4     QI CHENG/AU
E8           2     QI CHENG FENG/AU
E9           2     QI CHENG JIU/AU
E10          1     QI CHENGGANG/AU
E11          4     QI CHENGJIU/AU
E12          1     QI CHENGWEI/AU

=> s e3
L23         24 "QI CHEN"/AU

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E1           8     DE BONT H J G M/AU
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E3           0 --> DE BONT HENDRICUS/AU
E4           1     DE BONT HENDRICUS BARTHELOMEAS ANDREAS/AU
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E5            1      DE BONT HENDRICUS BARTHOLOMEAS ANDREAS/AU
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E7            3      DE BONT J/AU
E8            1      DE BONT J A/AU
E9           91      DE BONT J A M/AU
E10           1      DE BONT J M/AU
E11           3      DE BONT JAN/AU
E12           1      DE BONT JAN A/AU

=> s e4-e6
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              1 "DE BONT HENDRICUS BARTHOLOMEAS ANDREAS"/AU
              1 "DE BONT HENDRICUS BARTHOLOMEUS ANDREAS"/AU
L24           3 ("DE BONT HENDRICUS BARTHELOMEAS ANDREAS"/AU OR "DE BONT HENDRIC
                US BARTHOLOMEAS ANDREAS"/AU OR "DE BONT HENDRICUS BARTHOLOMEUS
                ANDREAS"/AU)

=> e van der zee luutsche/au
E1            1      VAN DER ZEE L/AU
E2            5      VAN DER ZEE LUCIE/AU
E3            2 --> VAN DER ZEE LUUTSCHE/AU
E4            7      VAN DER ZEE M/AU
E5            1      VAN DER ZEE M C/AU
E6            1      VAN DER ZEE M D/AU
E7            1      VAN DER ZEE M E/AU
E8            3      VAN DER ZEE MAARTEN/AU
E9            1      VAN DER ZEE MARINA E/AU
E10           1      VAN DER ZEE NIENKE M/AU
E11           1      VAN DER ZEE NORBERTUS T E/AU
E12           5      VAN DER ZEE P/AU

=> s e1, e3
              1 "VAN DER ZEE L"/AU
              2 "VAN DER ZEE LUUTSCHE"/AU
L25           3 ("VAN DER ZEE L"/AU OR  "VAN DER ZEE LUUTSCHE"/AU)

=> e lansink mirian/au
E1            1      LANSINK G J/AU
E2            2      LANSINK M/AU
E3           13 --> LANSINK MIRIAN/AU
E4            1      LANSINK P O/AU
E5            1      LANSINK PAULUS HERMANUS/AU
E6            1      LANSINK ROTGERINK H/AU
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E8           11      LANSINK ROTGERINK HANS/AU
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E11           1      LANSINK ROTGERINK HERMANUS GERHARDUS JOSEF/AU
E12           6      LANSINK ROTGERINK HERMANUS GERHARDUS JOZEF/AU

=> s e2-e3
              2 "LANSINK M"/AU
             13 "LANSINK MIRIAN"/AU
L26          15 ("LANSINK M"/AU OR "LANSINK MIRIAN"/AU)

=> e van norren klaske/au
E1            7      VAN NORREN DIRK/AU
E2            4      VAN NORREN K/AU
E3           14 --> VAN NORREN KLASKE/AU
E4            1      VAN NORREN R W/AU
E5            1      VAN NORSTAND J/AU
E6            1      VAN NORSTRAND ANN MARIE/AU
E7            1      VAN NORSTRAND MICHAEL D/AU
E8            1      VAN NORSTRAND MICHAEL DON/AU
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E9            1     VAN NORSTRAND ROBERT A/AU
E10           1     VAN NORT J L/AU
E11           1     VAN NORT STEVEN D/AU
E12           1     VAN NORTON R/AU

=> s e2-e3
              4 "VAN NORREN K"/AU
             14 "VAN NORREN KLASKE"/AU
L27          18 ("VAN NORREN K"/AU OR "VAN NORREN KLASKE"/AU)

=> d his

     (FILE 'HOME' ENTERED AT 08:58:02 ON 06 APR 2005)

     FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, WPIDS' ENTERED AT 08:58:23 ON 06
     APR 2005
L1         58879 S "HMG-COA REDUCTASE" OR "3-HYDROXY-3-METHYLGLUTARYL" OR "3-HYD
L2          1730 S SQUALENE (W) SYNTHASE?
L3         17172 S (ALISMA ORIENTALE?) OR TYPHA? OR (SALVIA MILTIORHIZA?) OR (PO
L4          2244 S (ARTHEMISIA CAPILLARIS?) OR (ARTEMISIA CAPILLARIS?) OR (CRATA
L5         17779 S PHYTOSTEROL? OR (PLANT STEROL?) OR CHOLESTANE? OR PHYTOSTANOL
L6         41050 S SITOSTEROL? OR ETHYL CHOLESTEROL? OR STIGMASTEROL? OR ERGOSTE
L7          5879 S DEMOSTEROL? OR DEHYDROCHOLESTEROL? OR CHALINOSTEROL? OR PORIF
L8          5549 S "7-A-HYDROXYLASE" OR "ACYL-COA ACYL TRANSFERASE"
L9         13684 S "POLYGONUM MULTIFLORUM" OR "POLYGONUM CUSPIDATUM" OR CURCUMA?
L10      2318821 S FOOD? OR BEVERAGE? OR DRINK? OR SUPPLEMENT? OR (NUTRITIONAL S
L11      2815316 S TABLET? OR CAPSULE? OR MICROBEAD? OR EMULSION? OR POWDER? OR
L12      2456140 S "PUFA" OR (POLYUNSATURATED FATTY ACID?) OR (EICOSAPENTAENOIC
L13        60151 S L1 OR L2
L14        19200 S L3 OR L4
L15        57512 S L5 OR L6 OR L7
L16        19228 S L8 OR L9
L17            2 S L13 AND L14 AND L15 AND L16
L18            2 DUP REM L17 (0 DUPLICATES REMOVED)
L19           63 S L13 AND L15 AND L16
L20           36 DUP REM L19 (27 DUPLICATES REMOVED)
L21           36 S L20 AND CHOLESTEROL?

     FILE 'STNGUIDE' ENTERED AT 09:17:43 ON 06 APR 2005

     FILE 'CAPLUS' ENTERED AT 09:26:38 ON 06 APR 2005
                  E CHEN QI/AU
L22           499 S E3
                  E QI CHEN/AU
L23            24 S E3
                  E DE BONT HENDRICUS/AU
L24             3 S E4-E6
                  E VAN DER ZEE LUUTSCHE/AU
L25             3 S E1, E3
                  E LANSINK MIRIAN/AU
L26            15 S E2-E3
                  E VAN NORREN KLASKE/AU
L27            18 S E2-E3

=> s l22 or l23 or l24 or l25 or l26 or l27
L28         555 L22 OR L23 OR L24 OR L25 OR L26 OR L27

=> s l28 and cholesterol?
        153626 CHOLESTEROL?
L29          21 L28 AND CHOLESTEROL?

=> d l29 1-21 ibib ed abs

L29  ANSWER 1 OF 21  CAPLUS  COPYRIGHT 2005 ACS on STN
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ACCESSION NUMBER: 2005:17926 CAPLUS
TITLE: Studies on the differentially expressed proteins in liver of hypercholesterolemic mice
AUTHOR(S): Feng, Yamin; Zhu, Yefei; Chen, Xiuying; Sha, Jiahao; Fan, Leming; **Chen, Qi**
CORPORATE SOURCE: Atherosclerosis Research Center, Nanjing Medical University, Nanjing, Jiangsu Province, 210029, Peop. Rep. China
SOURCE: Zhongguo Dongmai Yinghua Zazhi (2004), 12(3), 279-282
CODEN: ZDYZFM; ISSN: 1007-3949
PUBLISHER: Zhongguo Dongmai Yinghua Zazhi Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 10 Jan 2005
AB The liver protein profiles of hypercholesterolemic and normal mice were comparaed by using the technol. of proteomics. The hypercholesterolemic mice were obtained after feeding atherogenic diet for 14 wk. Protein extns. from mice livers were separated by two-dimensional electrophoresis and the gels were analyzed with image anal. software. The differentially expressed proteins were identified primarily by mass spectrometry and then confirmed by comparing with the nice gel image in protein database Swiss Prot. Results showed that the hypercholesterolemic mouse model has been successfully prepared The total **cholesterol** levels in plasma and liver of hypercholesterolemic mice increased significantly. The protein extns. separated by two-dimensional electrophoresis have got high resolution and reproducibility. Sixteen differentially expressed protein spots (>2 fold) have been found and 8 of which were identified as major urinary proteins (MUPs), carbonic anhydrase III and glutathione S-transferase P2. It was conclusions that the under-expression of MUPs, carbonic anhydrase III and Glutathione S-transferase P2, which regulated by androgens, may be related to diet-induced hypercholesterolemia.

L29 ANSWER 2 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:415605 CAPLUS
DOCUMENT NUMBER: 142:111794
TITLE: Analysis of low density lipoprotein receptor function and gene mutation in patients with familial hypercholesterolemia
AUTHOR(S): Guan, Xiaoxiang; Li, Mingfang; Fan, Leming; **Chen, Qi**
CORPORATE SOURCE: Atherosclerosis Research Center, Nanjing Medical University, Nanjing, Jiangsu Province, 210029, Peop. Rep. China
SOURCE: Zhonghua Yixue Yichuanxue Zazhi (2003), 20(2), 138-142
CODEN: ZYXZER; ISSN: 1003-9406
PUBLISHER: Huaxi Yike Daxue
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 24 May 2004
AB The function and gene mutation of low d. lipoprotein receptor (LDLR) in Chinese patients with familial hypercholesterolemia (FH) were investigated. Lymphocytes were isolated from 10 mL anticoagulated peripheral blood of the patients, and then a flow-cytometric method (FCM) with 1,1'-dioctadecyl-3,3,3',3-tetramethylindocarbocyanine perchlorate labeled low d. lipoprotein (DiI-LDL) was used to identify the function of LDLR on the surface of lymphocytes. Genomic DNA was isolated from whole blood of FH patients, and analyzed by PCR-single strand conformation polymorphism (SSCP) and nucleotide sequencing methods. The defects of binding and uptaking of LDLR were identified by FCM in 2 FH patients in one family, and their parents were examined in the present study. Then they were analyzed genetically. The detected mutation was a deletion of A, which caused a frame shift in codon 297 of exon 6 and introduced a beforehand stop codon in codon 369. A novel mutation of LDL receptor gene

was detected by the combination of FCM and PCR-SSCP methods.

L29 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:253443 CAPLUS
DOCUMENT NUMBER: 141:18644
TITLE: Expression profile of lipid metabolism-related genes in human fetus liver
AUTHOR(S): Tang, Zhen; Li, Xiaoyu; He, Long; Chen, Xiuying; Fan, Leming; **Chen, Qi**
CORPORATE SOURCE: Atherosclerosis Research Center, Nanjing Medical University, Nanjing, Jiangsu Province, 210029, Peop. Rep. China
SOURCE: Zhongguo Dongmai Yinghua Zazhi (2003), 11(3), 203-206
CODEN: ZDYZFM; ISSN: 1007-3949
PUBLISHER: Zhongguo Dongmai Yinghua Zazhi Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 29 Mar 2004
AB Thirty-three P-labeled cDNA probes were prepared by RT-PCR using mRNA from human fetus livers of the first and the third trimester of the gestation. The probes were hybridized with human gene chip containing 16363 clones. The hybridizing signals were scanned by ELA-300 Plate/Fluorescent Image Analyzer. The differential expressed genes were conformed by fluorescent semi-quant. PCR. The results showed that the expression of fatty acid decomposition related genes increased and the expression of genes associated with fatty acid and **cholesterol** synthesis decreased with the increase of the gestation, among 28 differential expressed genes (at least 2 fold). Measurement of lipids in 15 fetus livers showed that the contents of total **cholesterol** and triglycerides decreased with the increase of the gestation. The results indicated that the synthesis of **cholesterol** and triglycerides and their levels in fetus livers would decrease as the fetus develops.

L29 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:521502 CAPLUS
DOCUMENT NUMBER: 139:244030
TITLE: APOE polymorphism and angiographic coronary artery disease severity in the Women's Ischemia Syndrome Evaluation (WISE) study
AUTHOR(S): **Chen, Qi**; Reis, Steven E.; Kammerer, Candace M.; McNamara, Dennis M.; Holubkov, Richard; Sharaf, Barry L.; Sopko, George; Pauly, Daniel F.; Bairey Merz, C. Noel; Kamboh, M. Ilyas
CORPORATE SOURCE: Graduate School of Public Health, Department of Human Genetics, University of Pittsburgh, Pittsburgh, PA, 15261, USA
SOURCE: Atherosclerosis (Shannon, Ireland) (2003), 169(1), 159-167
CODEN: ATHSBL; ISSN: 0021-9150
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 09 Jul 2003
AB Genetic variation in the apolipoprotein E (APOE) gene is a significant determinant of variation in plasma **cholesterol** levels and it also affects the risk of coronary artery disease (CAD). The authors examined the association of the APOE polymorphism with CAD severity in women from the NHLBI-sponsored Women's Ischemia Syndrome Evaluation (WISE) study. Quant. coronary angiog. was used to classify subjects as having normal/minimal CAD (<20% stenosis), mild CAD (20-49% stenosis) and significant CAD (≥50% stenosis). The women with ≥50% stenosis were further stratified according to the number of vessel disease they have (one, two, or three). In white subjects, the frequency of APOE4

carriers (3/4 and 4/4 genotypes) was significantly higher in the combined mild/significant CAD group (≥20% stenosis) compared with the normal/minimal CAD group (<20% stenosis) (31.3 vs. 19.2%) with an adjusted OR of 2.40 (95% CI: 1.47-3.93). Furthermore, the APOE4 allele was significantly associated with the increased vessel disease number ($\chi 2=8.04$). This association of the APOE4 allele with CAD severity was present only in women with family history of CAD. APOE polymorphism also showed significant assocns. with increasing plasma total **cholesterol** and low-d. lipoprotein (LDL)-**cholesterol** in whites. These data support the hypothesis that the APOE4 allele is an independent risk factor not only for the presence of CAD and hyperlipidemia, but also for the angiog. severity of CAD in white women with a family history of disease.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 5 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:429411 CAPLUS
DOCUMENT NUMBER: 137:24317
TITLE: **Cholesterol** lowering supplement containing phytosterols
INVENTOR(S): **Qi, Chen; De Bont, Hendricus Bartholomeus Andreas; Van der Zee, Luutsche; Lansink, Mirian; Van Norren, Klaske**
PATENT ASSIGNEE(S): Neth.
SOURCE: U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002068095	A1	20020606	US 2000-726308	20001201
CA 2430315	AA	20020606	CA 2001-2430315	20011129
WO 2002043506	A2	20020606	WO 2001-NL866	20011129
WO 2002043506	A3	20021003		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002016470	A5	20020611	AU 2002-16470	20011129
EP 1337162	A2	20030827	EP 2001-998234	20011129
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: US 2000-726308 A 20001201
WO 2001-NL866 W 20011129

ED Entered STN: 07 Jun 2002

AB The invention provides a composition and a method for lowering blood serum **cholesterol** levels or for preventing elevated blood serum **cholesterol** levels, as well as suitable composition comprising (a) one or more phytosterols and/or phytostanols or a mixture thereof capable of reducing **cholesterol** absorption in the intestine, (b) a composition capable of inhibiting **cholesterol** biosynthesis, and (c) a composition capable of increasing **cholesterol** metabolism, wherein at least one of compns. b. and c. is preferably derived from plants. A capsule contained phytosterol mist. including brapiscasterol, campesterol, stigmasterol, and sitosterol, Radix Polygoni multiflora estimate, and Flos

Chrysanthemi extract

L29 ANSWER 6 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:180268 CAPLUS
DOCUMENT NUMBER: 137:258080
TITLE: Ectopic co-expression of human apolipoprotein AI and lecithin **cholesterol** acyltransferase in mice skeletal muscle cells introduced by retroviral vectors
AUTHOR(S): Yu, Shuzhen; Fan, Leming; **Chen, Qi**; Wang, Nan; Chen, Xiuying; Wei, Enhui
CORPORATE SOURCE: Atherosclerosis Research Center, Nanjing Medical University, Nanjing, 210029, Peop. Rep. China
SOURCE: Zhongguo Dongmai Yinghua Zazhi (2001), 9(5), 380-384
CODEN: ZDYZFM; ISSN: 1007-3949
PUBLISHER: Zhongguo Dongmai Yinghua Zazhi Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 14 Mar 2002
AB The possibility of ectopic expression of apolipoprotein AI and lecithin **cholesterol** acyltransferase(LCAT) by myogenic cells was studied in order to develop a new approach of gene therapy for atherosclerosis(As). Recombinant replication-deficient viral particles were prepared with polycistronic retrovirus vectors containing apo AI cDNA, LCAT cDNA. Mice primary cultured myoblasts and myogenic cells line C2C12 were transfected by these viruses. The efficiency of transfection and the state of integration were detected by PCR, while the expression of apo AI and LCAT were measured by ELISA and immunohistochem. method. All transfected mice myoblasts and C2C12 cells gained the ability of co-expressing human apo AI and LCAT. Stable transfected C2C12 cells line selected by G418 maintained the ability of co-expressing apo AI and LCAT for 60 days. PCR shown the apo AI cDNA and IRES sequence were integrated into genomes of target cells effectively. These finds indicated mouse primary myoblasts and C2C12 myoblasts transduced with recombinant retroviral vectors could efficiently express and secrete human apo AI and LCAT.

L29 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:191029 CAPLUS
DOCUMENT NUMBER: 134:364530
TITLE: Inhibition of scavenger receptor A expression treated with PMA by tyrosine protein kinase inhibitor genistein
AUTHOR(S): Jin, Yan; **Chen, Qi**; Wei, Enhui; Jiang, Li; Fan, Leming; Wang, Nan; Chen, Xiuying
CORPORATE SOURCE: Atherosclerosis Research Center, Nanjing Medical University, Nanjing, 210029, Peop. Rep. China
SOURCE: Shengwu Huaxue Yu Shengwu Wuli Xuebao (2001), 33(1), 142-146
CODEN: SHWPAU; ISSN: 0582-9879
PUBLISHER: Shanghai Kexue Jishu Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 21 Mar 2001
AB The relationship between scavenger receptor type A and cell signal transduction was studied. Human U937 macrophages were treated with tyrosine protein kinase inhibitor genistein and incubated with [125I]ox-LDL or ox-LDL, and the cellular degradation of [125I]ox-LDL or binding were measured and effect of genistein on cell surface expression of SR-A mRNA transcription was determined by RT-PCR. The binding of R937 macrophages to lipids, and SR-A mRNA transcription, degradation of lipids by U937 macrophage, and accumulation of **cholesterol** in the cells were inhibited by genistein. The results showed that the function of scavenger receptors may be correlated with cell tyrosine protein kinase, and SR-A may participate directly in signal transduction.

L29 ANSWER 8 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:24531 CAPLUS
DOCUMENT NUMBER: 135:150901
TITLE: Low density lipoprotein particle size in patients with CETP gene mutation increases
AUTHOR(S): Wang, Jun-jun; Chen, Da-ning; Qiang, Hong-juan; Zhang, Ling; Zhuang, Yi-yi; **Chen, Qi**
CORPORATE SOURCE: Atherosclerosis Research Center, Nanjing Medical University, Nanjing, 210029, Peop. Rep. China
SOURCE: Zhongguo Dongmai Yinghua Zazhi (2000), 8(3), 217-220
CODEN: ZDYZFM; ISSN: 1007-3949
PUBLISHER: Zhongguo Dongmai Yinghua Zazhi Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 11 Jan 2001
AB Aim: To study the relation between **cholesterol** ester transfer protein (CETP) gene mutation and size of low d. lipoprotein (LDL) particle. Methods: Exon 15 missense mutation (442D:G) in CETP was determined using PCR-RFLP method in 200 patients with coronary artery disease (CHD) . LDL particle size was analyzed by non-denaturing polyacrylamide gradient gels. Results: 6 heterozygotes and 1 homozygote were found to had the 442D: G mutation among 200 CHD patients. Frequency of this mutation was 3.5%. The patients with gene mutation (n = 7) had significantly larger particle diams. than those without the mutation (n = 40) (26.92 ± 0.79 nm vs. 25.71 ± 0.66 nm, resp.; P <0.01). LDL subfraction pattern in all the patients with gene mutation is pattern A. The distribution of LDL subfraction pattern was significantly difference between two groups. The patients with gene mutation had decreased plasma CETP level, while elevated level of HDLC and apoA I compared with control. Conclusion: LDL particle size in patients with CETP gene mutation increases.

L29 ANSWER 9 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:273037 CAPLUS
DOCUMENT NUMBER: 133:172735
TITLE: Transformation and expression of reverse **cholesterol** transport pathway associated protein genes in skeletal muscle
AUTHOR(S): Fan, Le-Ming; Zhang, Hui; **Chen, Qi**; Wei, En-Hui; Cai, Hai-Jiang
CORPORATE SOURCE: Atherosclerosis Research Center, Nanjing Medical University, Nanjing, 210029, Peop. Rep. China
SOURCE: Shengwu Huaxue Yu Shengwu Wuli Xuebao (2000), 32(2), 109-114
CODEN: SHWPAU; ISSN: 0582-9879
PUBLISHER: Shanghai Kexue Jishu Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 27 Apr 2000
AB Viral and nonviral vectors containing apoAI, apoE or lecithin **cholesterol** acyltransferase (LCAT) genes were constructed and transfected into. myogenic cells in vitro or injected directly into mouse skeletal muscle. The expression efficiencies of these vectors were assayed to investigate the possibility of ectopic expression of these genes in skeletal muscle and to develop a safe and convenient gene therapy method for atherosclerosis. The primary cultured mouse myoblasts, C2C12 cells transfected with pCMV apoE3 expressed human apoE3 successfully and the expressed product was secreted into the medium. Mouse skeletal muscle efficiently expressed apoE3 in vivo after direct plasmid injection. The expression level of Ad-RSV-apoA I in primary cultured mouse myoblasts was correlated with virus titer. Human apoAI was synthesized in mouse skeletal muscle by direct injection of recombinant virus and was secreted into blood continuously up to 30 days. Functional LCAT was expressed by C2C12.2 and 293 cells transfected with conventional vector or recombinant AAV plasmid DNA. The expression efficiency of recombinant AAV plasmid DNA

was 2-5 times higher than that of conventional plasmid vector. The data may be used in gene therapy method for atherosclerosis by enhancement of reverse **cholesterol** transport using skeletal muscle as target.

L29 ANSWER 10 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:526477 CAPLUS
DOCUMENT NUMBER: 132:87999
TITLE: Effect of protein kinase C inhibitor on scavenger receptor in human U937 macrophage-like cells
AUTHOR(S): Jin, Yan; **Chen, Qi**; Wang, Nan; Chen, Xiu-Ying; Wei, En-Hui; Zhou, Chun-Lei; Fan, Le-Ming
CORPORATE SOURCE: Atherosclerosis Research Center, Nanjing Medical University, Nanjing, 210029, Peop. Rep. China
SOURCE: Shengwu Huaxue Yu Shengwu Wuli Xuebao (1999), 31(4), 395-399
CODEN: SHWPAU; ISSN: 0582-9879
PUBLISHER: Shanghai Kexue Jishu Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 24 Aug 1999
AB In order to investigate effects of cell protein phosphorylation on scavenger receptor, human U937 macrophage-like cells were treated with the protein kinase C inhibitor staurosporine, then the cells were incubated with [125I]ox-LDL or ox-LDL, and the cellular degradation of [125I]ox-LDL, its binding to receptor and the internalization of cell surface ox-LDL receptor complex as well as the accumulation of lipids within cells were measured sep. Moreover, the effects of the drug on expression of cell surface receptor were observed by means of autoradiog. The results indicated that staurosporine could enhance U937 cells to bind lipids and stimulate scavenger receptor expression, and could reduce degradation of lipids by U937 cells and the accumulation of **cholesterol** within the cells. It suggests that the function of scavenger receptors may be correlated with cell protein phosphorylation.

L29 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:688332 CAPLUS
DOCUMENT NUMBER: 130:133962
TITLE: Study on the lipid decreasing effect of simvastatin in familial hypercholesterolemia
AUTHOR(S): Wang, Nan; **Chen, Qi**; Chen, Xiuying; Cai, Haijiang; Cheng, Wenlin; Lu, Xian; Chen, Jianguo
CORPORATE SOURCE: Research Center of Artherosclerosis, Nanjing Medical University, Nanjing, 210029, Peop. Rep. China
SOURCE: Jiangsu Yiyao (1998), 24(4), 248-249
CODEN: CIYADX; ISSN: 0253-3685
PUBLISHER: Jiangsu Yiyao Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 30 Oct 1998
AB Five homozygous and 4 heterozygous patients received the HMG-coA reductase inhibitor simvastatin 10 mg orally per day for 30 days. Total **cholesterol** was 5.45-24.37 mmol/L, in the homozygous patients it averaged 17.10 and in heterozygous patients 7.72 mmol/L. After a month of therapy, in homozygous patients a decrease of total **cholesterol**, LDL, and apoB was 17.86, 19.58, and 17.35%, resp., but no change was observed in the HDL-C and triglycerides. The results suggest that simvastatin is effective in decreasing blood lipids in both homozygous and heterozygous patients in this series.

L29 ANSWER 12 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:219247 CAPLUS
DOCUMENT NUMBER: 126:235529
TITLE: Assessment of oxidatively modified apolipoprotein B in serum with a new method

AUTHOR(S): **Chen, Qi**; Chen, Bingying; Chen, Xiuying; Wang, Nan
CORPORATE SOURCE: Atherosclerosis Research Center, Nanjing Medical University, Nanjing, 210029, Peop. Rep. China
SOURCE: Nanjing Yike Daxue Xuebao (1996), 16(5), 414-416
CODEN: NYDXFS; ISSN: 1007-4368
PUBLISHER: Nanjing Yike Daxue
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 04 Apr 1997
AB The expression level of 4-hydroxynonenal (HNE) antigen determination (epitopes) on apolipoprotein B (APOB) was determinated by an enzyme-linked immunosorbent assay (ELISA). The results showed the mean expression antigen determinant in men (156.5 mg L-1) was higher than that in women (147.6 mg L-1). The expression of HNE antigen determinant also increased with age in patients below 70. The regression anal. showed that the expression of HNE-epitopes on apo B was pos. related to serum levels of ferritin, total **cholesterol**, triglycerides, and low d. lipoprotein-**cholesterol**. This suggests that the assessment of HNE-epitopes on apo B is a useful tool to detect lipid peroxidn. in serum.

L29 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:276619 CAPLUS
DOCUMENT NUMBER: 125:6126
TITLE: Ursodeoxycholylsarcosine inhibits intestinal **cholesterol** absorption in rats with intact enterohepatic circulation
AUTHOR(S): Wang, Xiao-Lin; **Chen, Qi**; Hofmann, A. F.; Tso, P.
CORPORATE SOURCE: Medical Center, Louisiana State University, Shreveport, LA, 71130-3932, USA
SOURCE: Falk Symposium (1995), 80(Bile Acids in Gastroenterology), 262-267
CODEN: FASYDI; ISSN: 0161-5580
PUBLISHER: Kluwer
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 11 May 1996
AB The aim of this study was to compare the effect of ursodeoxycholylsarcosine (UDC-sarcosine) with that of taurocholate (C-tau) on the absorption and transport of triglyceride and **cholesterol** by the rat small intestine. UDC-sarcosine and C-tau were equally effective in promoting the uptake and lymphatic transport of the fatty acids from triolein. In contrast, the uptake and lymphatic transport of **cholesterol** were markedly inhibited by UDC-sar as compared to C-tau. The findings from this study have 2 important implications: first, the fact that UDC-sar can inhibit **cholesterol** absorption in animals with intact enterohepatic circulation of bile salts would imply that UDC-sar can potentially be used therapeutically to inhibit **cholesterol** absorption in humans; and secondly, it is tempting to speculate that there may exist a critical ratio of UDC-sar to C-tau above which UDC-sar can inhibit **cholesterol** absorption.

L29 ANSWER 14 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:843036 CAPLUS
DOCUMENT NUMBER: 123:252130
TITLE: LDL receptor research in China
AUTHOR(S): Cai, Haijiang; Fan, Leming; Sun, Ximing; **Qi, Chen**
CORPORATE SOURCE: Atherosclerosis Research Center, Nanjing Medical University, Nanjing, 210029, Peop. Rep. China
SOURCE: Chinese Medical Journal (Beijing, English Edition) (1995), 108(3), 177-82

CODEN: CMJODS; ISSN: 0366-6999
PUBLISHER: Chinese Medical Association
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
ED Entered STN: 10 Oct 1995
AB A review, with 28 refs., on: identification of familial hypercholesterolemia in China; clin. features and diagnostic research of familial hypercholesterolemia; monoclonal antibodies against LDL receptor and fetal functional LDL receptor; factors affecting the LDL receptor activity; LDL receptor biol. at the level of mol. biol.

L29 ANSWER 15 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1992:609515 CAPLUS
DOCUMENT NUMBER: 117:209515
TITLE: Lipoprotein receptor mediated metabolism of [14C]arachidonic acid labeled chylomicron remnants by HepG2 cells
AUTHOR(S): **Chen, Qi**; Floren, Claes Henrik; Nilsson, Aake
CORPORATE SOURCE: Res. Dep. I, Univ. Hosp., Lund, S-221 85, Swed.
SOURCE: Lipids (1992), 27(9), 664-8
CODEN: LPDSAP; ISSN: 0024-4201
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 28 Nov 1992
AB During lipolysis of chylomicron triacylglycerol by lipoprotein lipase, arachidonic acid (AA) esters are hydrolyzed at a slower rate than the predominant 16-18 C fatty acid esters. The further metabolism of the AA that is hereby enriched in the chylomicron remnant acylglycerols has not been investigated. In the present study, the LDL-dependent and -independent metabolism of [14C]AA present in chylomicron remnants was examined in the human hepatoma cell line Hep G2. Mesenteric duct-cannulated rats were fed [14C]AA and [3H]**cholesterol** in corn oil, and the chyle obtained was injected i.v. into hepatectomized rats to form chylomicron remnants labeled with [14C]AA in the triacylglycerol (TG) and with 3H in the cholesteryl ester portion. The remnants were then incubated with Hep G2 cells. The uptake of [14C]AA within 2-4 h was similar to that of [3H]cholesteryl ester. After uptake into the cells, [14C]AA was preferentially incorporated into phospholipids, a high proportion being found in phosphatidylcholine, phosphatidylethanolamine, and phosphatidylinositol. [14C]AA and [3H]cholesteryl ester uptake were influenced to similar extents by factors known to regulate the LDL receptor and by an anti-LDL receptor antibody. Addition of compactin thus increased the uptake of [14C]AA by 50% in 4 h and mevalonolactone decreased uptake by 86%. Using an anti-LDL receptor antibody, 25.0% of [3H]**cholesterol**/cholesteryl ester and 37.7% of [14C]AA binding to the cells at 4° was blocked. There was no lipolysis of [14C]TG or [14C]diacylglycerol by lipase secreted into the medium during incubations. Thus, after the uptake of chylomicron remnants by Hep G2 cells, which in part occurs via the LDL receptor, AA is liberated from the acylglycerols and is preferentially incorporated into phospholipids.

L29 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:405637 CAPLUS
DOCUMENT NUMBER: 115:5637
TITLE: Regulation of chylomicron remnant uptake in the human hepatoma cell-line Hep G2. Role of the low-density lipoprotein receptor
AUTHOR(S): **Chen, Qi**; Floren, Claes Henrik; Nilsson, Aake; Infante, Recaredo
CORPORATE SOURCE: Res. Dep., Univ. Hosp., Lund, Swed.
SOURCE: Biochimica et Biophysica Acta (1991), 1083(2), 173-8
CODEN: BBACAQ; ISSN: 0006-3002
DOCUMENT TYPE: Journal

LANGUAGE: English
ED Entered STN: 12 Jul 1991
AB Uptake and degradation of chylomicron remnants by the human hepatoma cell line Hep G2 was studied. Mesenteric lymph was collected from rats and injected into hepatectomized rats to obtain chylomicron remnants. This remnant preparation was taken up and catabolized by Hep G2 cells. The uptake process was dependent on cell growth and was regulated by compactin (a HMG-CoA reductase inhibitor) which suppresses **cholesterol** synthesis and by mevalonolactone, which enhances **cholesterol** synthesis. A monoclonal anti LDL receptor antibody blocked binding of chylomicron remnants to Hep G2 cells to a degree, which was comparable to but generally lower than the suppression of low-d. lipoprotein binding. The results thus indicate that in Hep G2 cells, chylomicron remnant uptake is regulated, similarly to low-d. lipoprotein uptake, and that a significant part of the remnant uptake is mediated through the LDL receptor.

L29 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1989:590138 CAPLUS
DOCUMENT NUMBER: 111:190138
TITLE: Hydrolysis of triacylglycerol arachidonic and linoleic acid ester bonds by human pancreatic lipase and carboxyl ester lipase
AUTHOR(S): **Chen, Qi**; Sternby, Berit; Nilsson, Ake
CORPORATE SOURCE: Dep. Med., Univ. Lund, Lund, Swed.
SOURCE: Biochimica et Biophysica Acta (1989), 1004(3), 372-85
CODEN: BBACAQ; ISSN: 0006-3002
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 25 Nov 1989
AB The hydrolysis of polyenoic fatty acid ester bonds with pure human colipase-dependent lipase (I), with carboxyl ester lipase (**cholesterol** esterase) (II) and with these enzymes in combination was studied, using [3H]arachidonic acid- and [14C]linoleic acid-labeled rat chylomicrons as a model substrate. During the hydrolysis with I, the amount of 3H appearing in 1,2-X-diacylglycerol (DG) markedly exceeded that of 14C. When II was added in addition, this [3H]DG was efficiently hydrolyzed. II alone hydrolyzed triacylglycerols (TG) at a low rate. The hydrolysis pattern with human duodenal content was similar to that seen with I and II in combination. Increasing the concentration of taurodeoxycholate (TDC) and taurocholate or of TDC alone stimulated the hydrolysis of [3H]TG and [14C]TG, but increased the accumulation of labeled DG that could act as substrate for II. It was suggested that very-long-chain polyenoic fatty acids of DG formed during the action of I on TG containing these fatty acids may be a physiol. substrate for II.

L29 ANSWER 18 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1987:27907 CAPLUS
DOCUMENT NUMBER: 106:27907
TITLE: The effect of estrogen on high-density lipoprotein metabolism in rats
AUTHOR(S): **Chen, Qi**; Zhuang, Qingqi; Mei, Meizhen
CORPORATE SOURCE: Fac. Pharm., Shanghai Med. Univ., Shanghai, Peop. Rep. China
SOURCE: Shengwu Huaxue Yu Shengwu Wuli Xuebao (1986), 18(3), 252-7
CODEN: SHWPAU; ISSN: 0582-9879
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 07 Feb 1987
AB The serum high-d. lipoprotein **cholesterol** [57-88-5] (HDL-C) level and HDL-C total **cholesterol** (TC)/HDL-C low-d. lipoprotein **cholesterol** (LDL-C) ratio of ovariectomized normal female rats after administration of 17β-estradiol [50-28-2] for 2 wk (group I,

2.5 μg estradiol/day, group II, 125 μg estradiol/day) were increased, whereas the serum LDL-C level and LDL-C/TC were decreased. The binding and uptake of rat 125I-labeled HDL by rat hepatocytes were increased in rats treated with estrogen, whereas the degradation of rat 125I-labeled HDL was unchanged. In addition, the concentration of HDL-C in rat liver perfusate was elevated in rats treated with estrogen. Thus, estrogen may increase the synthesis and(or) secretion of HDL from rat liver, and this effect may be greater than those caused by the uptake and degradation of HDL by rat hepatocytes. This probably is the major reason for the increase of rat serum HDL-C level after estrogen treatment. In rats treated with estrogen, the activity of serum lecithin-**cholesterol** acyltransferase [9031-14-5] (LCAT) was increased and the activity of postheparin plasma hepatic endothelial lipase [9001-62-1] (HEL) was decreased, but postheparin plasma lipoprotein lipase [9004-02-8] (LPL) was unchanged. The effects on LCAT and HEL might contribute to the increase of rat serum HDL-C.

L29 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1986:127534 CAPLUS
DOCUMENT NUMBER: 104:127534
TITLE: Cyclic AMP content and ultrastructural changes in rabbit aortic wall after i.v. injection of hypercholesterolemic serum
AUTHOR(S): Cai, Haijiang; Chen, Xiuying; **Chen, Qi**; Yao, Rongfen
CORPORATE SOURCE: Dep. Pathophysiol., Nanjing Med. Coll., Nanjing, Peop. Rep. China
SOURCE: Nanjing Yixueyuan Xuebao (1984), 4(1), 23-5
CODEN: NAYXEW; ISSN: 1000-5331
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 19 Apr 1986
AB Rabbits were i.v. injected with either normal serum (**cholesterol** content 44 mg%) or hypercholesterolemic serum (**cholesterol** content 841 mg%) isolated from other rabbits. Rabbits were sacrificed 3 h later, aorta samples were examined by electron microscopy and analyzed for cAMP contents. CAMP contents in aortic wall of rabbits injected with hypercholesterolemic serum were significantly lower than those of rabbits injected with normal serum. Electron microscopy showed pathol. changes were in aortic walls of rabbits injected with hypercholesterolemic serum.

L29 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1986:127533 CAPLUS
DOCUMENT NUMBER: 104:127533
TITLE: Changes of cyclic AMP content in experimental atherosclerotic lesion areas
AUTHOR(S): Cai, Haijiang; Zhu, Mintian; Chen, Xiuying; **Chen, Qi**; Gao, Da
CORPORATE SOURCE: Dep. Pathophysiol., Nanjing Med. Coll., Nanjing, Peop. Rep. China
SOURCE: Zhonghua Xinxueguanbing Zazhi (1985), 13(3), 187-9
CODEN: CHHCDF; ISSN: 0253-3758
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 19 Apr 1986
AB Rabbits were fed with **cholesterol** and egg yolk powders to induce atherosclerosis. Some rabbits were sacrificed at the 16th wk; other rabbits were fed with normal feed for 8 more wk, then fed with feed containing small amount of **cholesterol** for 10 more wk; these rabbits were sacrificed at the 34th wk. Aorta samples were examined for histopathol. changes and analyzed for cAMP contents. During the 34 wk period, rabbits were healthy and gaining wt steadily. Serum **cholesterol** contents at the 0, 16th, and 34th wk were 46, 1324, and 476 mg/dL, resp. Histopathol. changes were slight for rabbits sacrificed at the 16th wk but

were significant for rabbits sacrificed at the 34th wk. CAMP contents were 0.50-0.5/pmol/mg protein for aorta of control rabbits fed with normal feed; they were 1.37 and 3.13 pmol/mg protein for atherosclerotic lesion areas from rabbits sacrificed at the 16th and the 34th wk, resp.

L29 ANSWER 21 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1986:84789 CAPLUS
DOCUMENT NUMBER: 104:84789
TITLE: **Cholesterol** removal from cultured human skin fibroblasts
AUTHOR(S): Liu, Guoqing; Cai, Haihong; **Chen, Qi**; Huang, Manqian; Chen, Xiuying; Li, Wuqing
CORPORATE SOURCE: Dep. Pathophysiol., Nanjing Med. Coll., Nanjing, Peop. Rep. China
SOURCE: Nanjing Yixueyuan Xuebao (1984), 4(4), 232-4
CODEN: NAYXEW; ISSN: 1000-5331
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 22 Mar 1986
AB A modification of the method of O Stein et al. (1975) is described for assessing the effectiveness of some compds. in removing **cholesterol** from cells, e.g., cultured human skin fibroblasts. Fibroblasts were labeled with [3H]**cholesterol**, washed, then cultured at 37° for 24 h in media containing compds. tested for removing **cholesterol**; [3H]**cholesterol** concns. in cells and in culture media were then measured by liquid scintillation counting for calculating **cholesterol** removal rates. Human and bovine lipoprotein-deficient serum and bovine serum albumins demonstrated strong capabilities in removing **cholesterol** from fibroblasts; **cholesterol** removal rates were pos. correlated to the concns. of these compds. When dibutyryl cAMP and **cholesterol** removing compds. were added simultaneously to fibroblast cultures, **cholesterol** removal rates were inhibited; when dibutyryl cAMP was added to fibroblast cultures 24 h before the addition of **cholesterol** -removing compds., **cholesterol** removal rates were promoted.

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(FILE 'HOME' ENTERED AT 08:58:02 ON 06 APR 2005)

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, WPIDS' ENTERED AT 08:58:23 ON 06 APR 2005

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L1        58879 S "HMG-COA REDUCTASE" OR "3-HYDROXY-3-METHYLGLUTARYL" OR "3-HYD
L2         1730 S SQUALENE (W) SYNTHASE?
L3        17172 S (ALISMA ORIENTALE?) OR TYPHA? OR (SALVIA MILTIORHIZA?) OR (PO
L4         2244 S (ARTHEMISIA CAPILLARIS?) OR (ARTEMISIA CAPILLARIS?) OR (CRATA
L5        17779 S PHYTOSTEROL? OR (PLANT STEROL?) OR CHOLESTANE? OR PHYTOSTANOL
L6        41050 S SITOSTEROL? OR ETHYL CHOLESTEROL? OR STIGMASTEROL? OR ERGOSTE
L7         5879 S DEMOSTEROL? OR DEHYDROCHOLESTEROL? OR CHALINOSTEROL? OR PORIF
L8         5549 S "7-A-HYDROXYLASE" OR "ACYL-COA ACYL TRANSFERASE"
L9        13684 S "POLYGONUM MULTIFLORUM" OR "POLYGONUM CUSPIDATUM" OR CURCUMA?
L10     2318821 S FOOD? OR BEVERAGE? OR DRINK? OR SUPPLEMENT? OR (NUTRITIONAL S
L11     2815316 S TABLET? OR CAPSULE? OR MICROBEAD? OR EMULSION? OR POWDER? OR
L12     2456140 S "PUFA" OR (POLYUNSATURATED FATTY ACID?) OR (EICOSAPENTAENOIC
L13       60151 S L1 OR L2
L14       19200 S L3 OR L4
L15       57512 S L5 OR L6 OR L7
L16       19228 S L8 OR L9
L17           2 S L13 AND L14 AND L15 AND L16
L18           2 DUP REM L17 (0 DUPLICATES REMOVED)
L19          63 S L13 AND L15 AND L16
L20          36 DUP REM L19 (27 DUPLICATES REMOVED)
L21          36 S L20 AND CHOLESTEROL?
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     FILE 'STNGUIDE' ENTERED AT 09:17:43 ON 06 APR 2005

     FILE 'CAPLUS' ENTERED AT 09:26:38 ON 06 APR 2005
                E CHEN QI/AU
L22           499 S E3
                E QI CHEN/AU
L23            24 S E3
                E DE BONT HENDRICUS/AU
L24             3 S E4-E6
                E VAN DER ZEE LUUTSCHE/AU
L25             3 S E1, E3
                E LANSINK MIRIAN/AU
L26            15 S E2-E3
                E VAN NORREN KLASKE/AU
L27            18 S E2-E3
L28           555 S L22 OR L23 OR L24 OR L25 OR L26 OR L27
L29            21 S L28 AND CHOLESTEROL?

=> s l28 and (phytosterol? or phytostanol? or plant sterol? or cholesthane?)
           3319 PHYTOSTEROL?
             96 PHYTOSTANOL?
         740841 PLANT
         410568 PLANTS
         916451 PLANT
                  (PLANT OR PLANTS)
          32868 STEROL?
           1138 PLANT STEROL?
                  (PLANT(W)STEROL?)
              0 CHOLESTHANE?
L30            1 L28 AND (PHYTOSTEROL? OR PHYTOSTANOL? OR PLANT STEROL? OR CHOLE
                  STHANE?)

=> d l30 1 ibib ed abs

L30  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2002:429411  CAPLUS
DOCUMENT NUMBER:          137:24317
TITLE:                    Cholesterol lowering supplement containing
                          phytosterols
INVENTOR(S):              Qi, Chen; De Bont, Hendricus
                          Bartholomeus Andreas; Van der Zee,
                          Luutsche; Lansink, Mirian; Van
                          Norren, Klaske
PATENT ASSIGNEE(S):       Neth.
SOURCE:                   U.S. Pat. Appl. Publ., 7 pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     US 2002068095         A1    20020606    US 2000-726308          20001201
     CA 2430315            AA    20020606    CA 2001-2430315         20011129
     WO 2002043506         A2    20020606    WO 2001-NL866           20011129
     WO 2002043506         A3    20021003
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,
             UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
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        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
            CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
            BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU 2002016470         A5    20020611    AU 2002-16470          20011129
     EP 1337162            A2    20030827    EP 2001-998234         20011129
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRIORITY APPLN. INFO.:                      US 2000-726308      A  20001201
                                            WO 2001-NL866       W  20011129
ED   Entered STN:  07 Jun 2002
AB   The invention provides a composition and a method for lowering blood serum
     cholesterol levels or for preventing elevated blood serum cholesterol
     levels, as well as suitable composition comprising (a) one or more
     phytosterols and/or phytostanols or a mixture thereof
     capable of reducing cholesterol absorption in the intestine, (b) a composition
     capable of inhibiting cholesterol biosynthesis, and (c) a composition capable
     of increasing cholesterol metabolism, wherein at least one of compns. b. and
     c. is preferably derived from plants.  A capsule contained
     phytosterol mist. including brapiscasterol, campesterol,
     stigmasterol, and sitosterol, Radix Polygoni multiflora estimate, and Flos
     Chrysanthemi extract


=> save
ENTER L#, L# RANGE, ALL, OR (END):all
ENTER NAME OR (END):109726308/l
L# LIST L1-L30 HAS BEEN SAVED AS 'L09726308/L'

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     (FILE 'HOME' ENTERED AT 08:58:02 ON 06 APR 2005)

     FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, WPIDS' ENTERED AT 08:58:23 ON 06
     APR 2005
L1         58879 S "HMG-COA REDUCTASE" OR "3-HYDROXY-3-METHYLGLUTARYL" OR "3-HYD
L2          1730 S SQUALENE (W) SYNTHASE?
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L4          2244 S (ARTHEMISIA CAPILLARIS?) OR (ARTEMISIA CAPILLARIS?) OR (CRATA
L5         17779 S PHYTOSTEROL? OR (PLANT STEROL?) OR CHOLESTANE? OR PHYTOSTANOL
L6         41050 S SITOSTEROL? OR ETHYL CHOLESTEROL? OR STIGMASTEROL? OR ERGOSTE
L7          5879 S DEMOSTEROL? OR DEHYDROCHOLESTEROL? OR CHALINOSTEROL? OR PORIF
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L9         13684 S "POLYGONUM MULTIFLORUM" OR "POLYGONUM CUSPIDATUM" OR CURCUMA?
L10      2318821 S FOOD? OR BEVERAGE? OR DRINK? OR SUPPLEMENT? OR (NUTRITIONAL S
L11      2815316 S TABLET? OR CAPSULE? OR MICROBEAD? OR EMULSION? OR POWDER? OR
L12      2456140 S "PUFA" OR (POLYUNSATURATED FATTY ACID?) OR (EICOSAPENTAENOIC
L13        60151 S L1 OR L2
L14        19200 S L3 OR L4
L15        57512 S L5 OR L6 OR L7
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L17            2 S L13 AND L14 AND L15 AND L16
L18            2 DUP REM L17 (0 DUPLICATES REMOVED)
L19           63 S L13 AND L15 AND L16
L20           36 DUP REM L19 (27 DUPLICATES REMOVED)
L21           36 S L20 AND CHOLESTEROL?

     FILE 'STNGUIDE' ENTERED AT 09:17:43 ON 06 APR 2005

     FILE 'CAPLUS' ENTERED AT 09:26:38 ON 06 APR 2005
                E CHEN QI/AU
L22           499 S E3
                E QI CHEN/AU
L23            24 S E3
                E DE BONT HENDRICUS/AU
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L24           3 S E4-E6
                E VAN DER ZEE LUUTSCHE/AU
L25           3 S E1, E3
                E LANSINK MIRIAN/AU
L26          15 S E2-E3
                E VAN NORREN KLASKE/AU
L27          18 S E2-E3
L28         555 S L22 OR L23 OR L24 OR L25 OR L26 OR L27
L29          21 S L28 AND CHOLESTEROL?
L30           1 S L28 AND (PHYTOSTEROL? OR PHYTOSTANOL? OR PLANT STEROL? OR CH
                SAVE ALL L09726308/L
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